564 We must acknowledge that the [153] Enaden often have very open minds and are gifted with an intelligence higher than the average of the ma- 564 jority of the Tuareg. That is why 644 they have sometimes filled trusted posts with the principal chiefs, who have used them as emissaries or interpreters, indeed even as [152] counselors.

Thus, at the time of the Hourst mission in 1896, Madidou, aménokal of the Ioullimmiden, officially delegated one of them to Gao to ... deal with the French officer.

564 The Enaden live either in camp 361 groups or in isolated tents or even individually; they are attached to a chief or a tribe.

564 Although they are foreign to the Tuareg race, they still enter into the components of the great family of veiled men, for the lives /176/ of the two groups are often intermingled. They speak Tamashek, [198] more specifically a special dialect, tenet, which they alone understand and which is a bit secret in nature. This dialect is unknown in the Ahaggar.

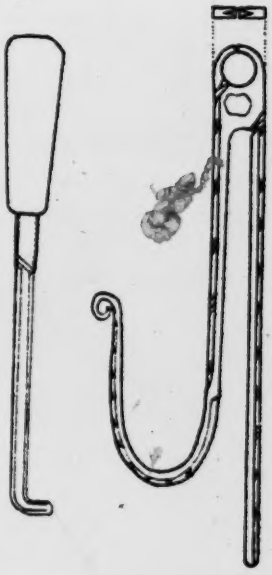

Fig. 17. Forceps for extracting teeth and instrument used for laying bare the roots.

[173] Legend attributes to them a common ancester named Tamamenet, and all of their fractions are supposed to have [174] originated in Adrar des Iforas. Their true origin is as obscure as can be; we are apt to say that they are descendants of the Jews who formerly lived at the Touat, in the Tamentit oasis, from which they

439 cotton clothes, and Sudanese-made lithams /veils/. Then after
484 two months of rest spent in the Sudan, during which time the camels revel in the rich pasture, they all set out again for the Ahaggar, where they arrive from January on. February and March see them leave again for the Tidikelt or Touat. At that time they take only a few camels and exchange the excess manufactured articles which they collected in the Sudan and trade dried mutton for dates. This trip lasts an average of two months, and toward the end of April everyone is back in the Ahaggar, as a rule. There is a rest of a few weeks, and everyone thinks about the next salt campaign he is going to have to prepare.

Thus we see a complete caravan cycle which, by itself, could allow the Tuareg a normal life. But as we have said, it implies a
[461] state of peace which was previously the exception, as well as an amount of work to be furnished which is not always in harmony with the warlike tastes of the Imochar.

224 Hunting supplies some employment for the Tuareg, as does gathering. But both of them are only uncertain pastimes, without
221 much profit. The life of the Tuareg may thus be summed up in a few lines: basic animal husbandry doubled by brigandage raised to the state of an institution, and accessorily by some caravaneering. Now we shall see the domestic life of the Tuareg.

/221/

Chapter 2

Dwellings

361 The camp. -- The camp is the traditional Tuareg form of
621 habitation; it is connected with nomadism which always implies animal husbandry. It includes a certain number of people gathered together under a patriarchal authority by very close bonds of kinship.

312 The question of water is fundamental in the formation of the
361 camp, both for the choice of its location and for the number of tents
182 to be included.

Water is obviously a problem for all life; it plays a role in the location of our small European villages, but this role is still greater in desert countries where water is quite rare. The existence of watering places is not only necessary for human life but also for the life of the domestic animals.

137 To this primordial condition of the existence of a watering
182 place must be added the condition of pasture for the domestic
312 animals. Therefore, we see that the establishment of a camp among
361 the Ihaggaren is conditioned by two main factors whose character may vary in time, depending on the seasons and the abundance or scarcity of rain. But in the last analysis the pasture needs take precedence, for, generally speaking, pasture is even rarer than
137 water, since it can sometimes be completely lacking. This need
182 for pasture forces tribes to split up and camps to be dispersed in
361 order to exploit it rationally. The situation is such that there are
621 rarely more than five or six tents in each group. Only the aménokal's
643 camp may number as many as 15 or 20 tents, but this is quite exceptional, involving the question of prestige and social order at the same time. Indeed, the aménokal supports a numerous family, his caliphs, his servants, etc. But this grouping around the chief is quite artificial, and the flocks which the people own are not with them but are /222/ spread out in the mountains, kept by Imrad or servants.

361 The camp is always established rather far from the watering
312 places, for it is preferable to be closer to the pastures. It is often five or six kilometers from water. The animals go there to drink
482 every two or three days, and the people use the occasion to get
492 their water supply, which will be carried in waterskins on their backs or under the stomach of the asses. Tuareg, moreover, do not like
361 to settle near a watering place, for it is always a stopping point for
609 transients, and they avoid making their presence known to strangers.

361 When a state of war existed, concealment was a capital necessity
609 easy to understand. By atavism, it seems that they have taken the
[721] habit of always placing themselves in spots where they escape the investigation of indiscreet glances.

361 They set up their tents on valley terraces, and sometimes in a
[732] valley itself, if they do not have to fear the rains, which usually fall at the end of the summer.

221 Because of the need to seek out pastures, camps are continually
361 being moved. They stay from one to two weeks, depending on whether the grass has been revived by rains or whether it is dry. But these moves are never of any great distance, not exceeding seven or eight kilometers. If we take as an example the Dag Rali tribe which nomadizes in the western part of Koudia, we find the camps set up in the high mountain valleys, as high as 2, 400 meters altitude, in summer. In winter, on the other hand, they settle on the slopes or in the low parts, seeking places sheltered from the wind. This, of course, is in a normal period of average pasture. But during the summer of 1940, following a long dry period, the Upper Koudia saw a great number of its watering places dry up, and vegetation was nonexistent, so to speak. Therefore, all the nomads took refuge in the low parts of the massif, in the Outoul, Eferer, and I-n-Amegel valleys where water was more abundant and where a trace of pasture still remained. At the beginning of September, the whole massif benefited from abundant rains. A week later, all the tents moved into the mountains in order to use the alpine pastures before winter and to save the lower valley grass for winter.

312 /223/ The watering places of Ătakor are chiefly natural reservoirs (aguelmam) and springs flowing at ground level in the hollows of the valleys. In the middle part, there are mainly rédir (abankor), or little wells, dug less than one meter down in the soil to reach the water layer, which is often retained by rocky sills. These rédir are exhausted in time if rains do not come to renew the water accumulated in the sandy wadi bed. The lower part of the Ahaggar benefits from all the water trickling down from the high mountains

include a first subterranean part made of numerous wells of depths varying from two to four meters, linked together by a small canal serving as a water conductor; then comes a part on top of the ground in the form of a canal, first at the same level as the wadi, then at a slightly higher level. They empty into the distribution reservoirs (majem), which by secondary canals (seguia) carry water to the gardens to be irrigated.

These agricultural centers therefore extend along the wadi on both sides of its banks. The cultivators settle near their gardens and live in straw or reed huts or little clay houses.

There are five centers in the high mountains between 1, 500 and 1, 800 meters in altitude, but the majority are located between 1, 200 and 1, 500 meters. Some of them can be lower, such as Silet (730 meters) and I-n-Amegel (1, 030 meters).

Some are small date groves such as Silet and Tibeghîn, which have 10, 000 palm trees, Ideles, Tâhârt, and Ăbalessa, but because of its altitude, the Ahaggar does not seem to be very suitable for date growing. The instability of the harratin is also an obstacle to the development of arboriculture which demands continual care. Cultivators who can be here today and gone tomorrow would not be capable of interesting themselves in work from which they could not draw immediate profit. The country would lend itself, however, to rather large-scale cultivation of peaches, /246/ apricots, figs, and grapes. The little center of Tăzerouk has many peach trees, and the center at Tit produces a famous raisin.

The Ahaggar soil is of a high quality, owing part of its richness to elements of volcanic origin which make up a large proportion of the alluvial deposits. Furthermore, the climate favors agriculture so much that the natives obtain two or even three harvests a year.

In the medium altitude centers, they sow wheat and barley in December and harvest it in May. Barely finished with this, they sow millet which is harvested at the beginning of October. In between the natives also engage in kitchen gardening: carrots,

174 /250/ introduced before or after the Christian era, it is nonetheless true that the ancestors of the Tuareg must have introduced it.

182 At the present time, human life in the Sahara, which is already of little consequence, would be reduced to zero without 233 the camel. This is a fundamental fact which has been amply demonstrated and which it is useless to dwell on. Th. Monod, who dedicated one of his works "To the camel and the goat, the vehicle and the container, the two sole conquerors of the Sahara, " (1)

1. Méharées/ Meharis/.

has not only been literary and witty, he has put the truth in a few words. Without the camel, no relation would be possible between the oases, no relation between North Africa and intertropical Africa.

233 One may therefore easily understand that the animal plays a large part in the life of the Saharian Tuareg, and that the latter make a great effort to raise camels. They have always endeavored to own many camels, and at the present time their livestock has increased to more than 10, 000 head.

[132] Although the camel has adapted perfectly to the Saharian pastures and terrain, it is nonetheless true that the aridity is such [492] that he has difficulty keeping in good condition, and that a slightly prolonged march has to be compensated for by a rest period lasting twice as long as the period during which he was tired out. That is [361] why the Ihaggaren nomadize with their camels on the borders of the Sahara in the steppe where there are acacias and graminaceae.

232 Ahaggar breeding is very famous. It furnishes animals which are resistant, very frugal eaters, capable of braving mountain rocks or marching for weeks on end over the granite regoliths of the Tanezrouft, something the Sudanese -bred camels could not do.

The Tuareg select the animals when they are very young, destining them either for saddle camels or for pack camels. The meharis are castrated and undergo special training. In speaking of

262
237 The ass is never eaten, and its skin is not used.

233 The horse. -- The horse is not a Saharian animal. In 1929 there were four horses in the Ahaggar belonging to the aménokal. [643 Today there are about twenty of them belonging to the members of 644] his family or to the notables of his camp.

[184 This is an expensive luxury, for these animals must be fed with barley, and there is not enough barley for the people themselves. 262] It tends to replace the camel for the Sudanese Tuareg.

/254/ The zebu. -- A few years ago the aménokal owned a [649 small herd of zebus which he had had sent from the Sudan. This 137] animal is not raised in the Ahaggar proper, and it could not be, for lack of appropriate pasture.

[312 The zebus serve in the agricultural centers by drawing water. They are furnished to the tenant farmer by the proprietor of the land, 427] and they are very poorly fed on hardship rations of hay and grass, or else they are put in rush pastures, which are generally plentiful in the agricultural centers.

[438 When the animal is tired, the owner exchanges him if that is at all possible. The privations which the zebus must undergo bring about their death in a relatively short span of time, and so in the Ahaggar it is a question of keeping them alive rather than raising them. In any case, they never follow the camps in their moves and never live near them.

361
136 When we talked about the camp, we told how the search for pasture directed its location.

233
361 Insofar as animal husbandry properly speaking is concerned, we observe that the small animals -- sheep, goats, and asses -- always stay in the Ahaggar and move with the camp.

As for camels, this is not the case; they are often put out to pasture far from the tents, watched only by a few shepherds. The majority are even kept in the Sudan 800 kilometers from their owners'

233 tents, where a few camps live permanently, filling the function of
361 shepherds for the people remaining in the Ahaggar.

At the same time, then, there is nomadism and transhumance. Definitions of the two kinds of life are as follows: there is nomadism when the tribe accompanies the moving livestock, and transhumance when the flocks are accompanied only by shepherds. And so we see that it is not possible to link the Tuareg to one category or the other, but that they engage in the two kinds of life, even in a mixed system in some instances. Quite often, in fact, the goats are pastured in the Ahaggar with a few shepherds, while the women stay in the mountains, and all the men are in the Sudan with the camels.

/255/ The migrations of these little herds of goats recall the moving of flocks which Vidal de la Blache has described as "mountain transhumance," that is, the camps move regularly from the summer pastures located on the peaks to the winter pastures in the
[132] plain. These moves cannot be as regular as they are in our country, in view of the irregularity of the rains.

It may thus be said that the Ahaggar Tuareg are small nomads by the short range of the moves of their camps, but that they are, on the other hand, great transhumants.

Rules Concerning Passage and Nomadization With Flocks

423 The lands over which the tribes range are fixed by the aménokal
643 to whom the land appertains. The origin of the tioussé comes
651 partly from the pasture rights which he grants.

Each tribe is proprietor of its land, with full and exclusive
423 enjoyment of it. Others can come settle among the tribe only with
621 the authorization of the tribe's amrar, but the right of way, including the right to water flocks, is secured for everyone.

These rules may be modified in periods of great dryness or in periods following plentiful rains.

278 of trust. Every time they take a caravan down south, they purchase [439] many drugs, either for their personal use or to resell in their country or at In-Salah.

164 There are not many diseases in the Ahaggar. The country is relatively healthy because of its very dry climate /261/ and the bracing action of the sun, which at the same time destroys microbic germs. Moreover, this is very fortunate, for with the small amount of hygiene practiced by the Tuareg it would be impossible to fight disease. It may also be true that this absence of hygiene stems from the fact that the Tuareg have not had to see the necessity of it.

[165 731] The Ahaggar people die of old age or of war wounds. Of course, there are sometimes epidemics capable of doing damage, but they are rare because of the isolation of the camps. The great distances which separate one from the other are a natural defense against mass contagions. These epidemics always come through the medium [361] of the caravaneers or the people who return from the Sudan, where they have stayed among sedentary people. We may mention smallpox, very common in the Sudan, which sometimes works great ravages in the tribes. Typhus, spread by lice, may decimate a whole tribe in a few days, and it is not uncommon among the Tuareg. But these two diseases are the exception when they are reported in [751] the Ahaggar. When a man returning from the Sudan is stricken with one of them, his case is reported by messengers long before his arrival, and the sick man is systematically isolated.

753 The Tuareg under the circumstances recognize the state of [771] contagion, but they do not see the causes of disease. According to them, it is caused by the action of bad genii. As good Moslems, they pretend not to believe in these genii, but in reality most of the talismans they wear on their persons are intended to protect them from these. To obtain them, they go to the marabouts or to men [156] with a reputation for their knowledge of the occult sciences; these sorcerers are known as amekelléou.

1: Lhote--184 E-5 (1929-1940) 1944 MS25 Tuareg MS25

177 In the last few years a number of notables, including the
492 aménokal, travel on horseback, but only when they travel in the
643 Lower Ahaggar which is furrowed by wide valleys, allowing them
133 to avoid rocks.

101 The Ihaggaren never travel on zebus and never use them for
492 transportation. In the Sudan, however, this animal is used as a saddle animal and a beast of burden.

/321/

Chapter 2

War and Raiding

721 The Tuareg distinguish two kinds of warring expeditions: war declared between fractions or peoples, which they call annemensi or amdjer; and raids, edjen or egen, which aim to pillage a camp or a herd by surprise.

Although war was rather rare, raids were, on the contrary, quite frequent. They were caused by the atavistic taste of the Tuareg for this sort of expedition. For the occasion they gathered together the most disparate elements, all moved by the same spirit of adventure and battle.

182 When an expedition against a camp was decided upon, those
221 present tried to gather the suitable number of men. They were
361 most frequent in summer, for, since the camps were forced to
721 spread out in the pastures, it was easier to surprise them.

War, on the other hand, was waged in winter, when the caravans had returned and the provisions necessary for the life of the tribe had been assured for the long months; this relieved the warriors of any material preoccupation about the lot of their families.

727 Each man had to procure arms for himself, and if he did not
426 own his own mehari, he found someone to lend him one; in case
714

351 and are extended out in front to form a sheltered enclosure which is usually semicircular with the entrance opening in the middle. The little forecourt and the ground inside the tent as well are covered with clean sand or very fine gravel from the bed of a nearby stream. Tuareg camps are always very tidy and astonishingly clean.

562 Both in the forecourt and in the tent itself
342 the men's place is on the right as you enter and the women's and children's on the left, which is the reverse of the arrangement customary among Arabs. It has often been said that the men's place is on the East, but this is simply because tents are almost always pitched facing south.

352 Household furniture and effects include
[439] sheepskins, or rugs obtained from the North by trade, leather bags of food and personal belongings, saddles, bridles and weapons,
[415] wooden bowls, funnels and spoons and maybe an earthenware cooking pot or two, a wooden
[412] mortar and pestle or perhaps two sets of different sizes, and a stone quern which may be either of the Neolithic saddle type or the small rotary model of the Roman Legions. Arms and food are stored in the men's half of the tent and equipment connected with food preparation in the women's half. A guerba full of water is hung from two long stakes just outside the forecourt. A brush
[343] windbreak built nearby shelters the outdoor kitchen, and another windbreak, some 50 to 100 yards away, shelters the family slaves.

Sometimes in the hottest months, and particularly when a camp remains stationary for a considerable length of time as it does in periods so dry that it is dangerous to move far from a permanent water supply, the tents may be stowed away and zeribas set up in their place. We recall that these are cubical or cylindrical structures made of reeds, long grass or palm fronds laid over a wooden framework measuring roughly 10 to 15 feet across and 8 to 10 feet high (fig. 37, *a*). The Amenokal's camp was installed in zeribas when the writer visited it in November, 1955, near the end of an unusually long period of drought.

• 361 Camps are always pitched in an inconspicuous spot and always on high ground except on very rare occasions when the sky is cloud-

361 less and there is no immediate fear of a sudden downpour that might produce flash floods. Each tent is occupied by a single family unit
592 and there are almost never more than 5 or 6
361 tents at the most in any normal camp. In the camp of the Amenokal there are usually 15
644 to 20 tents or even more, and one sees no flocks nearby, but this is a wholly artificial situation made possible only by the fact that the Amenokal and his personal retinue receive most of their supplies by truck from the nearest French Army post, and so can live in a way that would be impossible in the Ahaggar under anything approaching normal conditions.

Clothing, Cosmetics and Cleanliness. In the old
291 days the Tuareg used to wear leather shirts that reached below the knee and were sometimes elaborately decorated with fringe. Monod (1947, p. 47) recalls that Herodotus (IV, 189) described Libyan women as wearing fringed garments of red leather some 2,500 years ago, and he adds that some Tuareg women of the Niger Bend country still do so. Lyon (1821, p. 110 and plates facing pp. 110 and 113) tells us that leather shirts were worn by many of the Tuareg who visited Mourzouk while he was there in 1819, but Duveyrier (1864, p. 406) found that they were already becoming scarce only 40 years later. The present writer has seen no leather clothing worn by anyone in the Ahaggar, although Benhazera (1908, p. 37) says that poor folk wore leather clothes there 50 years ago while Reygasse (1950, p. 97) states that leather shirts are still worn by some of the slaves and Capot-Rey (1953, p. 226) adds that they are often worn by smiths.

Another once characteristic article of Tuareg dress that has now gone largely out of use was the high, conical fezlike cap, made of soft red felt and worn sticking up through the middle of the turban, that Lyon (1821) saw at Mourzouk. Barth (1857a, vol. 1, p. 424, footnote) says that caps of this kind were "obnoxious to the" Tuareg "tribes of pure blood" in 1850 but this is probably either an error or a matter of local eccentricity, for they were still standard equipment in Duveyrier's time. They disappeared almost completely from the Ahaggar, however, in the course of the next 50 years or less although

2: Brigga E-4, 5 (ca. 1956) 1958 MS25 Tuareg MS25
Hoggar
[P. 229]

241
133

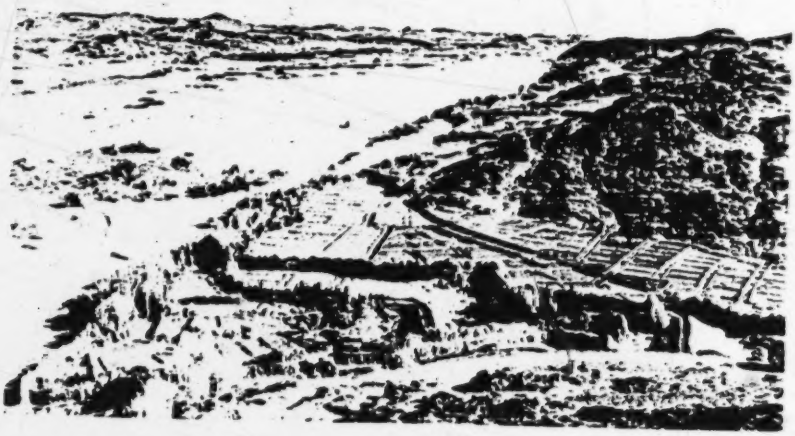

Fig. 14. Gardens at In Amguel, in the Ahaggar (80 odd miles north of Tamanrasset). Here we see the typical disposition of gardens in the agricultural centers of the central Sahara. A checkerboard of square garden plots, separated and at the same time connected by little irrigation ditches, is located just above the dry bed of an occasionally torrential stream, and just below the village, which is perched high enough above it to be safe from freshets and flash floods. (Photograph by Chasseloup-Laubat, courtesy of the *Musée de l'Homme*.)

[361]

3: Holiday J-5 (ca. 1955) 1956 MS25 Tuareg MS25
Hoggar

THE TUAREG OF THE AHAGGAR

by

GEOFFREY HOLIDAY

131 The Ahaggar region of the Sahara desert, with its administrative headquarters at Tamanrasset (Fort Laperrine) provides an almost exact geographical centre for the territory inhabited by the Tuareg; the nomadic tribes of the "blue veil". At the northernmost point is In Salah and to the south, Agadez. Eastward there is Djanet in the Tassili des Ajjer and the western boundary is formed, perhaps, by the line of the Tanezrouft. [361] Within this area the Tuareg wander from oasis to oasis or, in the case of a few, dwell peaceably in the shadow of the French towns and outposts that mainly owe their location to the existence of water tempered by administrative and strategic factors.

177 186 The Tuareg would appear, at first glance, to be one of the few remaining peoples of the world possessing a culture of their own that is entirely free of influences, direct or indirect. Some among the tribes still believe that the desert is the world, inhabited admittedly by many different kinds of people, but the world nevertheless. This is the extreme view, obviously not shared by those who have travelled on the great caravan routes as far south as Kano or to Timbucktu and the Niger. It may not be the view of [648] the younger generations who, to an increasing extent, are benefiting by the primary education facilities inaugurated by the French administrators; particularly in Algeria where the Ahaggar region lies at the foot of the Territoires du Sud: a knowledge of the French language does not necessarily bring about a lessening of superstitions or a widening of perspectives. One is always faced with the parallel of the farmer (who should have known better) and the ostrich: 'There ain't no such animal!' Nevertheless, from this aspect the influences are so few as to be negligible and are more likely to come from the varied genre of the official and semi-official indigenous population gathered together under the Tricolour at the towns and outposts of the region than from direct contact with the European. The Tuareg are almost the exception that proves the rule of man's gregariousness, though, naturally enough, they are gregarious in that they possess very strong tribal instincts.

291 751 As a tribe the Tuareg have very marked characteristics that immediately set them aside from any other social group in what may be termed loosely north Africa. To begin with, the men are seldom seen unveiled: the women, who can be very beautiful, never cover their faces although, often they will wear a head covering, presumably as protection against sun and sand. The men, however, do not wear the veil solely as protection against the elements. Discounting those few who have become soldiers under the French flag, a Tuareg man—or, more properly, a Targui—assumes the veil on approaching manhood and wears it continuously, even for eating and drinking. He unveils to no one, not even in the sanctuary of his tent alone, let alone in the presence of his wife. This veil wound low round his forehead and across the bridge of his nose covers the mouth, ears and nostrils. Since the other openings of his body are concealed by his robes he has complete protection against evil spirits entering and taking control—and this is the key to why the veil is worn. To protect his eyesight against the Evil One amulets are worn from a chain round the neck and doubtless also such amulets provide a measure of safety in battle.

174 The origins of the Tuareg tribe are particularly interesting in that they have as yet to be definitely established. Their antecedents go back anything between 600 and a 1,000 years and it is supposed that they are an offshoot of the Berber Arabs, driven into the desert during one of the many invasions of the Tel, the fertile coastal belts of Algeria and Morocco, that continued up to the 13th century when the Moors became really established on the Barbary coast. Likewise, the Berbers with their light skins and blue

The ahal takes place very often. All that is needed is for 533
a group of men and women to be gathered together in a camp. 584
Often a man comes from a considerable distance to court the 832
girl of his choice. When the year is good, that is to say, when [361]
the rains have brought the pastures to life and the camels are
giving much milk, several camps are set up close to each other,
and the ahal begins right after sunset.

The men of the camps gather with those who have come
especially because some woman attracts them. The women
bring their "imz'aden" violins. All those attend the ahal who [602]
are not afraid to be in the presence of one of their relatives
to whom they owe respect, such as a father, uncle, older
brother, etc. Young girls, married women, divorcées or widows,
all attend the ahal.

[361]

Dautheville

Tuareg Troup at Amr'a (Black Tifedest)

Gallantry, "asri" ⵄⵙⵔⵉ , is required, and jealousy [577]
strictly prohibited. Besides, this latter feeling is unknown [626]
among the Tuareg, and if one of them should think of show-
ing it, he would be booed and everyone would make fun of
him.

When a Tuareg arrives at the ahal near a woman whom
he wishes to court, he approaches her with his veil carefully
lowered and does not greet her with the usual "essalamou r'

To feed young camels and lambs, they use a kind of nursing bottle of wood shaped like a cup equipped with a tube. This utensil is called "ar'alala" ⵄⵔⵄⵍⴰⵍⴰ .

For dishes, one finds in the tent wooden bowls of all sizes, called "akous" ⴰⴽⴰⵙ , plural "ikassen" ⵉⴽⴰⵙⵙⴰⵏ , large wooden dishes, "tar'elalt" ⵜⴰⵔⵄⵍⴰⵍⵜ , and smaller dishes used as plates and called "tar'ehout" ⵜⴰⵔⵄⴰⵀⵓⵜ , plural "tireha" ⵜⵉⵔⵄⴰⵀⴰ . To ladle milk or gruel, the Tuareg use a large ladle, "temoulat" ⵜⴰⵎⵓⵍⴰⵜ , plural "timoulatin" ⵜⵉⵎⵓⵍⴰⵜⵉⵏ .

Dautheville

Tuareg Camp at Tazerouk

, and for eating they have ordinary wooden spoons called "tesoukalt" ⵜⵙⵓⴽⴰⵍⵜ , plural "tsoukaline" ⵜⵙⵓⴽⴰⵍⵉⵏ .

To separate the grains of "toulloult" and "afezzou" from their hulls, they use small trays of afezzou called "tissiit" ⵜⵉⵙⵙⵉⵜ , plural "tissiin" ⵜⵉⵙⵙⵉⵏ .

They also use a great deal the wooden mortar, "akabar" ⴰⴽⴰⴱⴰⵔ , with its pestle, "ihar'en" ⵉⵀⴰⵔⵄⴻⵏ .

Finally, they have hide sacks to hold dates or grains, which they call "adjera" ⴰⴷⵊⴻⵔⴰ , plural "idjerouen" ⵉⴷⵊⴻⵔⵓⴻⵏ .

All the above utensils are made of the wood of the "teborak" (Balanites aegyptiaca, Simaroubaceae) and of the abser', or "tamat," (Acacia arabica).

Many legends circulate about blacksmiths. They say that 326
because they work with iron and fire, they will go into the fire 565
of hell. They are scorned, first because they devote themselves
to a manual craft, a disgrace in the eyes of a Tuareg, and
secondly because it is said that they are of Negro origin. It is
also claimed that they were pagans and that their conversion
to Islamism is not sincere. They are also taken for sorcerers. [754]
The sheik Ben Djellas (see the Appendix /not translated/) says
of them: "Blacksmiths hate God and his Prophet, and they
betray God and his Prophet." Their ancestor was called
Tamamenet.

The blacksmith does not belong to any tribe. He goes
where he pleases, wherever he finds work. Sometimes he goes
to war, and he is said to fight well, but a noble Tuareg will not
cross swords with him.

In the Ahaggar a blacksmith is called "mr'allem," variation 326
of the Arab "maâlem." However, there is a word in Tamashek [192]
for him, "inedh," plural "inedhane," but it is not used. /73/

At Tamanrasset I was shown many ancient graves (of the [764]
"chouchat" shape) which, it seems, were the burial places of
a tribe of blacksmiths said to have been massacred and died of
starvation a very long time ago.

The gardens of the Ahaggar "ar'erems" are worked by the 241
Harratine of the Touat and the Tidilkelt, who bring their tools 312
with them. It is they also who dig the "foggaras," or covered 565
wells, and all the tools that they use come from the Saharan Oases.

Chapter XII

Agriculture. Ar'erems

While in all of the Ahnet no trace of agriculture is to be 241
found, however small, because of the scarcity of wells, whose 361
312

241 312 361

output is only enough to water the flocks, in the Ahaggar, on the contrary, a mountainous country where there is some water everywhere, a number of small villages called "ar'erem" ⵄⵔⵔⵉⵎ , plural "ir'ermane" ⵉⵄⵔⵔⵉⵎⵏ , have been built.

312 565 361 463

Since the Tuareg, nobles or imr'ad, dislike all manual work, these villages could not have been built without the indispensible help of the Harratine of the Touat and the Tidikelt, whom the Tuareg call "Izeggar'en" ⵉⵣⵣⵖⵔⵏ , meaning "mulattoes." Everything was made by the latter: the wells, /74/ "tounine," which are used for irrigation, as at Tazerouk; the "foggaras," or covered wells, "ifelane," and their irrigation canals as at Abalessa, Tit, and Tamanrasset; the fitting up of springs, as at Tadjemout. The Harratine made the gardens and became khammes of the Tuareg, landowners. They settled in these villages and there built huts of "diss" (Imperata cylindrica) or of "berdi" (Typha angustifolia) and little houses of baked earth.

[342 824)

241

The Harratine grow wheat, barley, and bechna in these gardens. These are the three essential crops, to which they add some vegetables: onions, kabouyas, or gourds, watermelons, and "guerroum" (a kind of long melon which is eaten green, like a cucumber, before it is ripe). Finally, at Tit they /75/ have planted some fine fig trees and a vine which yields a grape that seems delicious at this latitude. Similarly, at Abalessa, there are some vine slips and a fine palm.

Ideles (Koudia)

The gardens, or rather the fields, are enclosed by a hedge to prevent the depredations of the camels that graze free at night. But there are some that do not have this protective barrier, and the Harratine are forced to stand guard at night, turn, and turn about, lighting fires to drive the camels away from the crops.

edible, and considering also that there is a very fine palm at 245
Abalessa (which could become a splendid oasis since there is
no lack of water), one may ask if the creation of an oasis of
palms in the Ahaggar might not be tried with success. But the [438]
Ahl Azzi and all the inhabitants of the Tidikelt, who live
entirely on the sale of their dates to the Tuareg, have persuaded

[361]

Haratine Gourbi at Ideles
(Koudia)

the latter to the contrary, that the climate of their country is
not suited to growing palms. Besides, the Ahaggar do not in [185]
the least wish to undertake plantations from which one could
expect no profit for several years, and they prefer to stay with
growing wheat, barley, and bechna, which pay at once.

The Amenokal Moussa ag Amastane, realizing that the era 643
of raids will soon be ended forever, sees that it will be necessary 185
to demand from the soil the means of subsistence which raids 176
formerly procured. So he has announced his intention of having
a foggara dug at "Endid" and of having gardens made there,
and his example will very probably be followed. This is an
undertaking which will certainly be encouraged and supported,
and which shows the slow evolution which is beginning to take
place among the Tuareg, in the best interests of peace and
civilization.

5: Nicolaisen E-4, 5 (1951-1955) 1959
MS25 Tuareg MS25

Tuareg Letters (*Tifinagh*)	Transcription And Value In Arabic Letters		Notes
⋮	ɣ	غ	Prononcunced gutturally. Frequently transcribed as gh in literature.
⊙	s	س	
+	t	ت	
⋿	ṭ	ط	Emphatic
⋇	z	ز	
⌗	ẓ		Emphatic

For certain geographical names the mode of spelling is in accordance with that of the maps edited by Institut Géographique National. The pronunciation of vowels is not indicated. At the end of words the Tuareg sometimes indicate vowels with a dot, which may stand for any vowel.

Pastoral Ecology in Ahaggar and Air.

The Tuareg of the true desert country have their camps in or close to mountain massifs of which the more important are Ahaggar and Tassili-n-Ajjer. Geographically these two regions have many traits in common. In Ahaggar, which rises to 3000 metres above sea level, the annual precipitation according to official statistics is between 20 mm and 40 mm. These figures are extremely low, but more characteristic of the desert country is the irregularity of the rainfalls. In some years there may fall no rain at all, while in others precipitation is much bigger than appears from the figures above. Several dry years may follow each other alternating with periods of abundant rainfall. According to investigations by Dubiéf four years out of ten are so dry that rainfall is of no importance for the regeneration of pastures (Dubiéf 1947, p. 7–23). Owing to the scarcity and the fluctuations of precipitation in Ahaggar a persistent vegetation cannot generally exist outside river valleys and depressions which are flooded during heavy rain. In the valleys perennial plants comprise not only grasses and herbs but also tall trees among which tamarisk and acacia are prominent. In dry years the perennial plants have little value as fodder for the domestic animals of the Tuareg. A great many goats may then die from hunger, and to avoid such a disaster some Tuareg take their flocks to the plains of Tamesna or to the Adrar-n-Iforas Mountains where rain is normally more plentiful and grazing better than in Ahaggar. However, even in dry years the majority of Ahaggar Tuareg will remain in their native country with their goat-flocks. For although they run the risk of losing a great many goats during a drought in Ahaggar

5: Nicolaisen E-4, 5 (1951-1955) 1959
MS25 Tuareg MS25
Air

given by Nicolas (Nicolas 1950b, p. 474f.). The clans differ greatly in size ranging from 653 to 42 individuals. The average figure for a clan is about 230.

A clan is generally termed *tasusit* which seems to have the meaning of "a palm from which fingers issue". Many clans have an ancestress whose name is known to the members. The Kel Ferouan Tuareg however have very little genealogical knowledge. They rarely know their kinsmen more than three or four generations back, and they cannot trace the relationship between all clan members and their ancestress. Traditionally a clan is a group of matrilineally related persons, but there is nowadays a strong tendency to acknowledge the patrilineal principle for clan-membership. A more detailed description of Tuareg clans will be given in the later chapter on the Ahaggar Tuareg.

To-day the Air Tuareg live most of the year in camps consisting of three to five barrel-vaulted tents covered with mats (fig. 5 & 13). The inhabitants of these small camps generally form an extended family, e.g.,

1) husband, wife, married sons, and their children.
2) two brothers, their wives, married sons, and their children.
3) a brother and a sister together with their spouses and children.
4) husband, wife, unmarried children, husband's mother and mother's sister, and his sister's daughter with her husband.

In the rainy season *(akasa)* and in the beginning of the following dry season *(rarat)* several small camps of extended families may camp together. The only reason for this is said to be that kinsmen appreciate each other's company. I have myself never seen such big camps. During my visit to Air 1955 the annual pastures were not so well developed as to allow the concentration of many domestic animals in one and the same place. It is said that camps in the past were bigger than nowadays. The Air Tuareg were then constantly running the risk of being raided by pastoral Arabs, Tebu, or Tuareg from other groups.

Clan-endogamy is claimed an ideal by many Air Tuareg, but exogamous marriages are common and have occured also in the past. The members of two clans hold that they have intermarried since the remote date of their establishment. They claim descent from a brother and a sister who married two cross-cousins, and the preferred type of marriage among the Kel Ferouan Tuareg is in fact that to a cross-cousin – ideally to a mother's brother's daughter. This may be seen from the composition of 38 marriages which were as follows:–

Mother's brother's daughter	7
Father's sister's daughter	4
Classificatory cross-cousins	6
Other kinswomen	13
No blood-relationship between husband and wife	8
Marriages total	38

5: Nicolaisen E-4, 5 (1951-1955) 1959
MS25 Tuareg MS25
Ahaggar

to indicate that the two latter types of marriage are more common than are marriages with cross-cousins:– 582

Mother's brother's daughter	8
Father's sister's daughter	7
Classificatory cross-cousins	6
Mother's sister's daughter	11
Mother's sister's daughter's daughter	9
Other kinswomen	8
Marriages total	44

The Tuareg claim marriages with a maternal cousin or with her daughter to be superior to cross-cousin marriage because a man and his father will then belong to the same matrilineage.

The clans are divided into sections. There are four of these in the Dag Rali clan and eight in the three sub-clans of the Agouh-en-Tehele. When grazing is good the sections are identical with camps of 10–20 tents, which otherwise are split up in minor camps of 2–7 tents. A small camp generally consists of an extended family which co-operates in goat-herding and in various other tasks, although all animals are individually owned and every tent or household is self-supporting. The big camps formed during good grazing are made up of three or four small camps consisting of extended families related to each other. But the small camps within the bigger camps remain co-operative in goat-breeding, and there is generally a distance of 50–100 metres between each in order that their flocks shall not mix. When the small camps join each other and form bigger camps under favourable grazing conditions, it is not only because kinsmen appreciate each other's company, but also because the big camp is a co-operative unit in camel-breeding and caravan trading, for which the labour cannot be provided by a goat-herding camp. In case the small goat-herding units cannot remain together they camp so close to each other that contact between them is comparatively easy. A big camp will never correspond to a lineage, but will comprise part of a matrilineage of three to five generations plus people attached to the camp through their fathers and husbands according to the rules of residence outlined above (cf. fig. 11). A big camp or section has a leader, who with the title of *Khalifa* may also be the representative of the section in relation to the clan chief *(Amɣar)*. These khalifas are not necessarily chosen according to any rule of descent, but ideally the succession is matrilineal as it is for clan chiefs.

614 [361] 621 476 [596] [422] [613] 622 [614]

The kinship system in Ahaggar is different from that in Air (fig. 8–9), but the rules of kinship behaviour are very much the same. Joking relationship between cross-cousins, and joking and avoidance between in-laws are practised also in Ahaggar. But joking with a mother's brother's wife seems to be unknown in most clans. [Text continues on p. 108]

[184] [601] 602

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5: Nicolaisen E-4, 5 (1951-1955) 1959
MS25 Tuareg MS25
Ahaggar

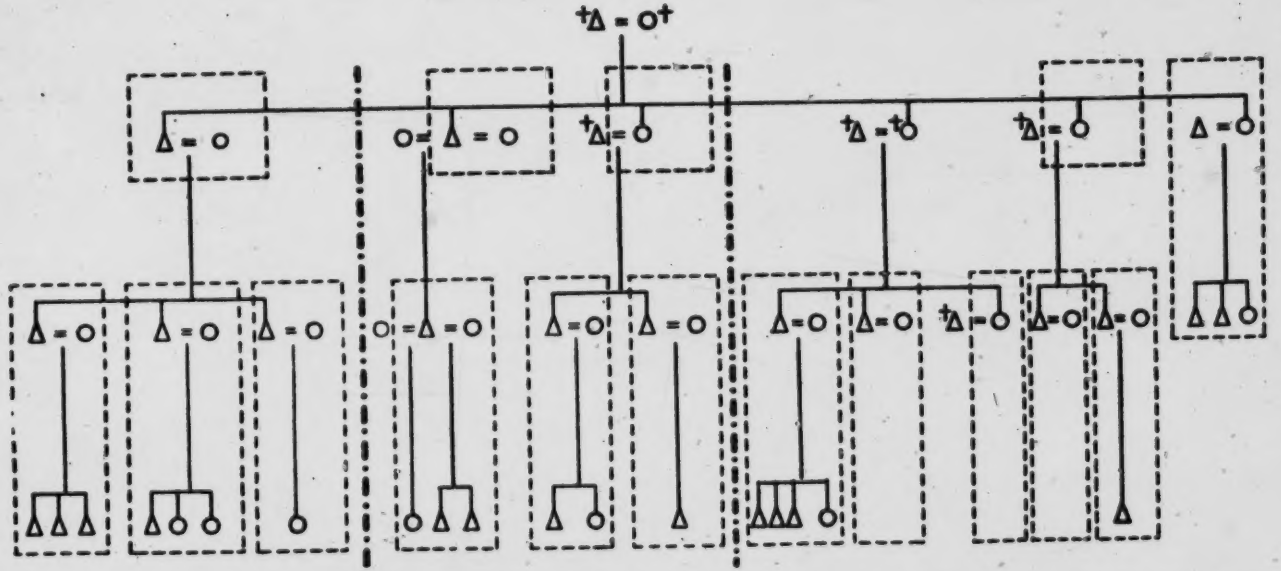

Fig. 11.–The section camp of the Kel Azernan (the Isandan sub-clan of the Agouh-en-Tebele clan). The camp comprises three goat-herding units of four, five, and seven tents forming three independent camps in case of dry pasture. When grazing is good the three goat-herding camps which co-operate in camel-herding and caravan trading will camp on the same spot with a small distance between each in order that the flocks of the three units shall not mix. – The household to the extreme right does not follow the general rule of residence illustrated fig. 10. Its members accordingly should camp together with the husband's family, which, however, lives in Air whence he has emigrated to Ahaggar.

241 /77/ or 1, 800 kilograms of grain to divide 63 times during
621 365 days, giving scarcely 100 grams a day per person, to which we may add three or four meals of meat per year.

"This year a green louse menaces the grain harvest; in summer a sort of 'mosquito' attacks the millet."

To complete these observations, one must add to the food listed for the harratin the very sweet tea they drink whenever they can, and it must be noted that this year 1949 was particularly bad.

If the wheat, set amid the arid mountains, gives an air of opulence to the village, the cultivator well knows that the production will be insufficient and that the fifth part of it coming to him is already pledged to Mozabite merchants to pay for the different purchases of the year. What to do? Go on farming, for such is life. This stubborn work to coax a little wheat from a hostile soil is most touching and merits a better success; but it would be necessary to educate these Negroes, and that is another story.

•[361] Certain of these centers are temporary; the harratin abandon them when the soil is exhausted or when the water is no longer sufficient for irrigation; others are always occupied and under cultivation. The harratin merely cultivate smaller areas during dry years. In the permanent centers, the gardens have fruit trees.

In the appendix is the list of the principal agricultural centers of the Ahaggar.

Animal Raising

233 A land of nomads, the Ahaggar is a region of extensive animal raising. The pastures grow according to the chance of rainfall, and the Tuareg use them with due regard to the growth of the grass. The irregularity of the annual rains obliges the Kel Ahaggar to drive the majority of their camel herd to Sudanese territory, so that about 7, 500 camels graze

342 /88 cont./ It takes three or four asabers to furnish a tent, two on the inside filter the wind, two others encircle the space in front of the tent, forming a small court, assuring privacy and a space sheltered from the wind, where someone is always to be found.

When one enters a tent, one sees that the right side is always the man's domain and the left side the woman's; each arranges his personal effects in an orderly fashion that is always surprising to the European.

342 About 50 meters away or more, but always within hailing
●361 distance, live the Negroes in an enclosure of dry branches called "afarra"; another enclosure next to it constitutes the kitchen.

A camp is made up of a number of tents of this type, /89/ with some distance between tents to preserve privacy.

During the dry season, when the search for pastures becomes compelling, the Tuareg are obliged to stop at a place near water, where the goats may find some meager pasturage. The black domestics then construct zéribas. They make a framework of forked branches, from two to 2.50 meters high, circular or almost so, with a diameter varying from three to five meters. Around and on this frame are attached tahlis (tiphas); the zériba then has an elegant appearance. If there are not enough tahlis, one gets along with other dry grasses, morakba, guettaf, etc.; the zériba then has a shabby appearance, but its merits as a dwelling are not lessened. In summer the zériba is much to be preferred to a tent, for it is much cooler.

The ground under the tent or zériba is always covered with
342 coarse sand from the wadi, which is frequently changed. A
356 hearth, consisting of four stones arranged in a square and imbedded in the ground, is used either to heat tea or to provide a little heat during winter evenings. Near the tents stakes
354 support the guerbas /waterskins/; one may also see the wood-
356 pile kept up by the Negroes and the big wooden mortar which
342

/90 cont./ The thickness of the walls varies from one to three toubs, or from 30 to 90 centimeters. The grave problem is that of the roof, which is made in the local style with a coat of tin over a bed of tahlis or reeds; the framework is made from fersig and ethel branches, with an average length of from two to 2.50 meters. In order to obtain a big enough room, the ends of these branches must be rested on a large log or on a semicircular arch made with toub. It is not possible, therefore, to make rooms more than four meters wide because of the length limitations of the logs or of the vault's span; the room may be made as long as desired by stringing together the units from two to 2.50 meters wide.

Some administration houses have iron beams, which permits the construction of wider rooms and avoids a grave annoyance, that of finding that a beam has been attacked by termites. In order to discourage termites, the frame is covered with drainage oil.

/91/ The inside plastering consists of black tin covered with a layer of white tin or, preferably, with lime, which sticks better. The outside plaster is red tin smoothed with the trowel or grooved vertically by the mason's fingers, which gives a pleasing effect. This red color gives Tamanrasset its particular look. Very often a small flowering garden brightens a house. The houses of Europeans have several rooms, a kitchen, a court, and often a small vegetable garden; they are in general smartly kept up.

Migrations

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The Tuareg only change their camps to find other pastures for the herds; when food for the animals becomes scarce within a radius of two to three hours' from camp, the head of the tent or subgroup, in agreement with the other members of the family, chooses a new site with good pasturage and, if possible, relatively near a water point. The imrad tribes make these

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/91 cont./ changes only within the bounds of their territory. In order to use pastures on the lands of a neighboring tribe, permission must be obtained from that tribe's amrar, and in addition a fee must be paid, which may be as much as two or three goats. Only the nobles move at will in the whole country.

We have already seen that the female camels are sent to Tamesna in a dry year, and that they stay there until a rainy year gives the Ahaggar desirable pastures. There then remain in the Ahaggar only a few male camels and all the goats, which accentuates the region's desert character. In these dry years the men go back and forth between the Ahaggar and the camel herds, sometimes taking Negroes with them, sometimes young adolescents. The women stay in the camps. A change of tent site is carefully planned, because of the scarcity of water points. /92/ It is not unusual to see a camp remain nearly a year at a site which is not too unfavorable.

During wet years, there are abundant pastures practically everywhere in the Ahaggar, water flows in the wadis, the female camels produce a lot of milk; one would think that the Tuareg then would sojourn long in the same place -- but no, quite the contrary, the camps are constantly moving.

Tuareg custom holds that when the pastures are just beginning to grow, the camp must not remain too long in the same place; this is a wise measure which permits plants to flower and bear seed, but putting that reason aside, there is no rational explanation of that continual shifting of tents in a country covered with the best pastures. Is there here a manifestation of the nomadic spirit? A careful psychological study would have to be made in order to understand the reasons behind these moves, which have no apparent practical purpose and which the Tuareg themselves are unable to justify.

Yet moving a camp is no joke. Dismantling the tents is easily and rapidly enough done by the women, but looking for the donkeys, the loading, the packing of the objects constitutes a job which to a European seems enough to drive one crazy; thought must also be given to milking the animals,

361 /92 cont./ to the departure of the herds, to the means of
166 moving the old people and babies. The camp is hardly ready to move before nine in the morning, although the work has been in progress since sunrise. About three in the afternoon the caravan halts for the night; the animals must then be unloaded, the asabers must be put up, the meals prepared, the animals milked; and the next day everything begins over again.

166 There is one regular annual migration; when the wheat
221 and barley ripen in the gardens, it is April, and all the caravans
361 returned from the Sudan have stored their millet in silos -- then nearly all camps head for the agricultural centers. The goats are left in the desert in the care of the Negroes. Each little agricultural center /93/ then sees a gathering of the Tuareg, who come to supervise the harvest and live at the expense of the khammès, according to the provisions of the agricultural contract. This is a joyous period, and tendi and ilougan are held every day.

In connection with these migrations, it must be noted that the Tuareg do not act exactly according to the necessities of the climate: a dry period should logically lead to an exodus by the tribes toward Sudanese territory, where the herds would be better fed in virtually permanent pastures, and yet the tents and goats stay in the Ahaggar. Political reasons do not suffice to explain this contradiction between custom and the obligations of the climate. Perhaps this custom may be seen as the effect of long habit reinforced by sentimental factors. It is certain that away from the Ahaggar and their own territories of nomadization, the Tuareg are ill at ease; they show their delight on returning to their mountains. There is a saying that the Tuareg are great travelers but not great nomads; the essential reason for this remark is certainly the profound attachment they manifest for their soil, which seems incompatible with the nomad mentality.

361 /93 cont./ To sum up the migrations of the Kel Ahaggar, let us say that they extend in a radius of about 100 kilometers, within the tribal lands, but that the men may lead the herds, according to the times, toward pastures 1,000 kilometers from the family camp, and that an annual series of caravans sees them cover 15° of latitude.

The harratin cultivators are only sedentary on occasion; each year there is a large human movement from one agricultural center to another. There are three reasons for this: the Tuareg, owners of the soil, are no longer able to furnish the hartani with enough seed or to fulfill the agricultural contract; water bwgins to be lacking in a center, or digging foggaras becomes impossible; lastly, the exhausted land needs rest. It is thus that, from one year to the next, an important, well-cultivated center may become /94/ insignificant and even deserted. It appears to be impossible to establish a cycle for these agricultural migrations.

Tuareg Furnishings

352 Lightness and flexibility are the two essential qualities of
492 Tuareg furnishings. All of these objects must be transported on the backs of animals; weight, therefore, is the principal enemy; moreover, it is easier for the animals to carry loads capable of molding themselves against the animals' bodies.
415 Thus we find a whole assortment of sacks, chiefly leather ones, in the Tuareg equipment.

These sacks are tanned in such a way as to keep the leather very flexible; but the process employed is suitable only for extremely dry climates: transported to France, the Tuareg leathers seem to come alive again, they swell with humidity, then give off a disagreeable odor, and finally become unusable.

415 All of these sacks are decorated. Some are colored and
531 bear designs put on with dye or are decorated with tinted

301 /183 cont./ Tisabatin: The tisabatin are ear pendants, simple rings of silver whose diameter is about ten centimeters; two tisabatin weigh 120 grams.

Teraout: large silver triangle worn on the chest; the hidden side is made of iron.

Ahbedj (plural: ihebdjen): The women always wear two. They are bracelets, the most popular type of which has the form of a simple ring with an opening. The two ends are polyhedral and are decorated with geometrical designs.

Tissegouar: silver pendants for the temples.

The Tuareg do not use gold; silver alone is used to make jewelry and the amulet cases called teraout.

The men wear smaller rings than the women.

/185/ VII

List of Agricultural Centers

103 Abalessa (altitude: 850 meters).

361 This was the largest agricultural center before our arrival in the Ahaggar; since then, Tamanrasset has surpassed Abalessa..

Abalessa is located 100 kilometers west of Tamanrasset in the Ibarras wadi at the confluence of the Abalessa wadi, which receives the waters of the Tit, Outoul, Tiffert, and Iglène wadis.

The population consists of more than a thousand harratin.

The cultivable surface is 150 hectares during favorable years; generally, the crops cover 80 hectares.

The owners of the gardens are some Kel Rela, Taïtok, Dag Rali, and Iklan Taoussit.

There are 11 foggara, the longest and deepest in the Ahaggar; some reach six kilometers in length, and the head wells are eight to ten meters deep.

103 /185 cont./ Approximately 300 palms grow freely or
● 361 nearly so; almost all have grown from nuts, and half are
621 dokkar (males)

Abalessa has a bordj /a small fort or solidly constructed house/ and an infirmary.

The tumulus of Tin-Hinan is located two kilometers from the bordj in the Tiffert wadi.

Centers of the Tiffert wadi.

Tounin Akourin.

A small center seven kilometers upstream from Abalessa. Two foggara and a tanout.

/186/ The amenokal has his permanent camp near gardens that he owns.

Tiffert Foulani.

Five kilometers upstream from Abalessa. Three foggara. There are about 30 palms. An active center, it is owned by the local harratin. Here is the residence of Si Ahmed Foulani, a well-known taleb /scribe/, who plays the role of cadi for the Tuareg.

Tiffert Tahtani.

Three kilometers upstream from Abalessa. Three foggara. Active and permanent center. Small village constructed of toub, overlooking some 40 palms.

Tin-Tazarouk.

One kilometer from Abalessa on the trail to Silet. One foggara. Zériba. Large quantity of diss (a large grass).

Centers of the Outoul wadi.

Outoul.

A long-abandoned center which is being revived; located between the old and new trails to In-Salah, 20 kilometers from Tamanrasset. Five foggara, two of them upstream. Several fruit trees.

Tahart.

Eighteen kilometers downstream from Outoul. Three foggara and one tanout. Owners: Taïtok and Tédjéhé n'Néfi.

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621

/186 cont./ About 100 palms, numerous fig trees and vines. A tiggert with abundant tahli. Very picturesque site.

Assileskine (altitude: 960 meters).

Center located six kilometers downstream from Tahart. Often abandoned. Owners: Taïtok. Three foggara, about 30 residents. Vines and several young palms. Rock drawings near the zéribas.

Ennedid (altitude: 914 meters).

Four kilometers downstream from Assileskine in a gorge at the confluence of the Outoul wadi. About 60 residents, nearly 100 palsm. Owners: Kel Rela, Dag Rali, and Iklan Taoussit. Very pretty site.

/187/ Centers of the Tit wadi.

Tit (altitude: 1, 127 meters).

Located in the Tit wadi, 50 kilometers from Tamanrasset. Fairly important center, more than 100 residents, houses of toub and zeribas. About 30 palms, numerous fig trees, and enormous vines. At this time, four foggara. Very important site for rock drawings.

Tin-Emensar.

Ten kilometers downstream from Tit. Abandoned center.

Dar Mouli.

Three kilometers downstream from Tin-Emensar, a small garden is cultivated. Site of an annual celebration where the Tuareg gather for the ziara of Moulay Abderrahmane.

Centers of the Tamanrasset wadi.

Tamanrasset (altitude: 1, 470 meters).

Fort Laperrine, administrative headquarters of the Ahaggar.

The military bordj was constructed in 1919 and used in 1920 after the abandoning of Tarahouaout.

In 1920, Tamanrasset had 40 residents. It was a small, unimportant center with three foggara; a few rare éthel and fersig lined the wadi.

103 /187 cont./ The French occupation created out of nothing
●361 the built-up area which became a road center after the
621 creation of automobile roads from Tamanrasset toward In-Salah and Algiers;

from Tamanrasset toward Agadès and Fort Lamy;

from Tamanrasset toward Tin-Zaouaten and Gao.

Secondary roads of local or tourist interest were later opened:

from Tamanrasset to Djanet by way of Idelès and Serouanout;

from Tamanrasset to Idelès by way of Tarahouaout, Tahifet;

from Tamanrasset to In-Azaoua (not completed);

from Tamanrasset to the Asekrem massif by way of the Illamane peak (tourist);

from Tamanrasset to the Asekrem massif by way of the
[491] Imalaoulaouen guelta and the Akarakar. This road, finished in 1952, makes it possible to circle around the high peaks of the Atakor; it /188/ completes the one mentioned just before. Its route, laid out by the head of the Tamanrasset annex, provides maximum protection against the rains; it discloses a succession of splendid panoramas and ends at the foot of the Asekrem plateau after having crossed the strangest assortment of peaks imaginable. This road is prolonged in the direction of the Issakarassen guelta, then will continue toward the Hirafok agricultural center to end in the Tefedest.

[439] Arab and Mozabite merchants very quickly installed themselves at Tamanrasset, offering merchandise coming from Tell and buying wheat, millet, and butter from the Tuareg, making usurious loans, in a word, draining away the Tuareg's small supply of cash to direct it toward the Mzab.

The houses are built for the most part on the right bank of the wadi in the nonirrigable areas. Tamanrasset has no local color whatsoever, but the red tint of the exterior plastering, the cleanliness and charm of the streets shaded by éthel and adorned by geraniums, produce a pleasing over-all

103 /188 cont./ effect. An admirable and almost unique thing
●36| in the Ahaggar is the circle of mountains which surrounds the
62| village; from the south bank of the wadi the view at sunrise or sunset is sensational.

At the present time Tamanrasset has some 20 foggara and a dozen tanout. The owners of the foggara are: the commune, some Adjouh n'Téhélé, some Tédjéhé n'Néfis, some harratin, and some merchants. The foggara are from four to five kilometers long. The gardens extend nearly six kilometers from the ksar /former fortified village/ of the Adriane to the ksar of Teggert. The cultivated area is about 70 hectares, counting the gardens of the small center of Tihegouine three kilometers downstream, watered by a foggara.

The commune owns a magnificent garden where all sorts of fruit trees are tried; it sets an example for the local gardeners. Many European houses have a small garden irrigated by foggara or by well.

The present population is about 2, 000 residents. This enormous growth in population presents a terrible /189/ water problem. It appears that an agricultural center in the Ahaggar cannot grow indefinitely without considering hydraulic works.

103 Tamanrasset, although favored from the point of view of
36| water resources, is a proof of what could be attempted in the
62| other agricultural centers if the French could advise the
648 harratin and furnish them examples.

The French population is divided in the following way:

A captain, annex head, administrator of the commune.

Two or three officer assistants.

Secretaries.

A school. Seven teachers, three of them nomads.

An observatory of global physics. Three physicists.

A telecommunications service. Four radio operators, two weather men.

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/189 cont./ A branch of the Company of Tropical Transportation.

An auxiliary postal receipts office.

A hotel.

A few retired persons at Tamanrasset without occupation.

From the military point of view, Tamanrasset is generally the base for a company of the camel corps. Units of the Saharan Engineer corps maintain the road from In-Salah to Tamanrasset and Agadez.

The French population totals about 120 persons; this number is subject to frequent fluctuations.

The number of Mozabite and Arab merchants, including their families, comes to about 100 individuals.

There are about 1, 900 harratin, an approximate figure, for many gardeners come and go from one agricultural center to another.

It is impossible to speak of Tamanrasset without thinking of General Laperrine and Father de Foucauld. The body of the general rests at Tamanrasset near the tomb where the priest was buried after his tragic death. The bordj where Father de Foucauld lived during the last years of his life is a tourist attraction; it is also possible to visit the hermitage built by the Father on the wadi's left bank.

/190/ Near the village of Adriane are found the tombs of Moussa ag Amastane, the Laperrine's amenokal friend, and of Dassine, the famous poetess.

In the house which was Moussa ag Amastane's, the maalmines, artisans of the Tuareg tribes, work.

Tamanrasset, administrative center, a necessary stop on the road from French West Africa and from French East Africa, is also an airplane stop destined to become more and more important.

Tourism tends to conquer the Ahaggar; the Touring Club of France has organized excursion caravans for several years. Scientists from all fields, enlightened travelers,

163 /190 cont./ mountain climbers in quest of virgin peaks, are
361 attracted to the still little-known country. For all of them
62 Tamanrasset is a departure base but not a place to linger.
[648] /

Tissenaouine

In the Tissenaouine wadi at its confluence with the Tamanrasset wadi. One foggara belonging to a hartani. Very well-cultivated garden.

Tagrambaït

In the Tamanrasset wadi, 15 kilometers south of Tamanrasset. Three foggara, well-cultivated gardens. Little possibility for growth.

Amsel (altitude: 1, 180 meters)

Located in the Amsel wadi a little before its confluence with the Tamanrasset wadi, about 30 kilometers south of Tamanrasset.

The owners of the gardens are the Adjouh n'Téhélé and the Tédjéhé n'Néfis. The gardens are located upstream and downstream from the tiggert, a veritable stream of running water where abundant tahli grow. Six foggara and three tanout. There are about 60 residents. The cultivable surface totals 30 hectares; there would be possibilities for extending the center downstream. Several fruit trees.

Intnérin

In the Tamanrasset wadi seven kilometers south of Amsel. Tiggert and numerous tahli. Two foggara. Unimportant /191/ center, with no possibility for growth. Boxed-in, very hot valley.

Idikel

In the Tamanrasset wadi 15 kilometers south of Amsel. Difficult to reach by auto. Three foggara and two tanout. Large amount of cultivable land but endangered by the big floods of the Tamanrasset wadi.

Tiguenouine

In the Tamanrasset wadi seven kilometers south of Tamanrasset. A large amount of tahli at the Amelalouline tiggert. Three foggara, abundant water.

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/191 cont. / Centers located on the In-Azaoua road

Izerzi

Fifteen kilometers south of Tamanrasset in the Izerzi wadi. A long-abandoned center revived in 1952.

Talan Téhédit

A long-abandoned center 20 kilometers south of Tamanrasset. Cultivated since 1951. Abundant water. Tiggert, tahli. Garden owners: Adjouh n'Téhéle and Tédjéhé n'Néfis. Three foggara and two tanout. Possibility for growth.

Ifok

Thirty kilometers south of Tamanrasset. Running water, tiggert, tahli. The gardens are upstream and downstream from the tiggert. Two foggara and three tanout. A frequently abandoned center.

Region of the Atakor

Ilaman (altitude: 2, 000 meters).

Highest center in the Ahaggar. Abandoned for a long time, traces of nine former foggara.

At the present time the village of Ilaman has a dozen residents. One foggara and two tanout are in operation. The Dag Rali own the gardens; their millet silos give the village a curious appearance.

Terhénanet (altitude: 1, 950 meters)

Located in the Terhénanet wadi on the edge of the Taessa massif. /192/ Like the village of Ilaman the village of Terhenanet is at the side of the road leading to the Asekrem. A small guelta is found downstream from the gardens. An unimportant center: about ten residents, two living foggara, four dead ones.

Centers of the southeastern Atakor

Tarahouaout (altitude: 1, 317 meters) -- (Fort Motylinski)

Located in the Tarahouaout wadi 80 kilometers from Tamanrasset by the automobile road. It was the administrative

103 /192 cont./ capital of the Ahaggar from 1908 to 1921. One
• 361 may see the old bordj overlooking the wadi, as well as old
621 houses at the foot of the cliff.

An important center, it is the fief of the Adjouh n'Téhélé tribe. Fifty-two hectares are cultivable, irrigated by ten foggara. There are numerous tamarisk. Fruit trees are in decline but there are still fig trees, apricot trees, and vines.

[172] Numerous pre-Islamic tombs are evidence of a very ancient occupation of this water point. Three rock-drawing sites exist on ridges downstream from the bordj.

Six kilometers downstream from the gardens, an enormous stand of tahli announces the entrance to very narrow gorges, in which one may follow over a distance of ten kilometers a veritable stream connecting a string of guelta. This is perhaps the most important permanent flow of water in the Ahaggar.

In-Dalag (altitude: 1, 450 meters)

Located in the In-Dalag wadi, this very important center extends over a length of 15 kilometers. The water table is fed by waters running from the southeast of the Atakor and from the Ahélégheg djebel. The Adjouh n'Téhélé own the gardens. In dry periods this center is partly abandoned, as well as the small villages downstream: Tehi n'Oudi, Tin-Tsoumar, Tabarakaten, In-Tinsi, In-Tolouline.

There are five foggara at In-Dalag. Downstream from the cultivated centers gorges are found where great numbers of tahli grow.

193/ Tahifet

An important center located in the wadi of the same name 50 kilometers north of Tarhaouaout. The Adjouh n'Téhélé are owners of the gardens. The cultivable surface comes to 22 hectares; there are eight foggara. Six kilometers downstream from the gardens is a tiggert surrounded by a large amount of spontaneous vegetation. The site is very picturesque.

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/193 cont. / Centers of the northern Atakor

Ideles

Very important center in the Tarouda wadi, overlooked by the Adrar Tadéraz. The village is located on the automobile road from Tamanrasset to Djanet 265 kilometers from Tamanrasset. The village consists of a bordj and an infirmary, as well as numerous stone houses. The residents, who number about 300, were originally from the Tidikelt. The ruins of an old ksar may be seen.

The gardens belong to the Kel Rela, the Dag Rali, the Kel Tazolé, and the Kel Amguid. The cultivable area amounts to about 40 hectares, irrigated by eight foggara and about ten tanout. About 300 palm trees are fairly well cared for; there are also numerous fig trees and vines.

Amenselane

Very small center six kilometers from Ideles. One foggara. Numerous tahli near the tiggert.

Tazerouk

A center which used to be very important but whose cultivable land is often carried off in pieces during big floods. Located 188 kilometers from Tamanrasset by the Ideles automobile road. The population is made up of freed Negroes who own the gardens but whose laziness has jeopardized this favored oasis. The altitude is 1, 896 meters; two wheat harvests per year are possible. The cultivable area amounts to 45 hectares, with hardly half of it sown. Enormous, untended fig trees grow, /194/ as well as very many peach trees and apricot trees. The summer climate at Tazerouk is the most pleasant in the Ahaggar.

In the wadis which end at Tazerouk, agricultural centers are established during the rainy years; these are: Sellemal, Ihebert, Teberbert, Taouakim, Tin-Ezzar.

Tizzeit

Unimportant center, long abandoned, now cultivated, located on the camel trail from Ideles to Tazerouk. Land

103 /194 cont./ belongs to the Ibardjien, an ancient tribe on the
• 361 way to extinction, redoubtable mountaineers and clever hunters
621 of wild sheep. Alkaline spring, tanout. Vines, fig trees, and numerous palms.

Tin-Founès

Abandoned center located on the Amadror road; numerous untended palms.

Hirafok (altitude: 1, 510 meters)

Located in the Hirafok wadi, on the automobile road from Tamanrasset to Ideles. The gardens run lengthwise and are well tended. Twenty-four hectares of cultivable land irrigated by five foggara and five tanout. A few fig trees. A bordj is constructed by the side of the road. The wadi valley is fairly well wooded; there is a tiggert downstream.

Im-Amguel (altitude: 1, 037 meters)

Large agricultural center located in the In-Amguel wadi on the road from Tamanrasset to In-Salah, 144 kilometers from Tamanrasset. A bordj and an infirmary. Four hundred residents. Ten foggara water well-tended gardens. There are some 100 palm trees, half of which are dokkar. Vines, fig trees, apricot trees, peach trees. Poultry.

Ifrok

Upstream from In-Amguel on the automobile road from Ideles. A center long abandoned, now cultivated. One foggara. The wadi is very well wooded.

Tasakimt

An abandoned center located between Ideles and Tazerouk. One tiggert upstream from which existed a foggara and four /195/ tanout. Abundant vegetation consisting of fersig and oleander.

Centers of the Tefedest

Mertoutek

A center in decline. There now exist two living foggara compared to ten before. Altitude: 1, 450 meters. Located in

103 /195 cont./ the Mertoutek wadi, to the east of the Tefedest,
361 260 kilometers from Tamanrasset. A few fruit trees. Im-
621 portant rock-drawing sites (Coche-Chasseloup-Laubat, Lelubre and M. Cousin sites).

In-Amertek

Abandoned center downstream from Mertoutek.

Ohet

Abandoned center to the northwest of the Tefedest. Two dead foggara. Land belonging to the Tédjéhé Mellet.

Adenek

Abandoned center in the Adenek wadi at the confluence of the Dehine wadi. Land belonging to the Kel Tefedest. There still remain a few fig trees and vines.

Abezzou

Abandoned center, land belonging to the Kel In-Rhar and Eouen n'Hada. Only a few zéribas and traces of guemoun are evidence of former cultivation.

Dehine

Center located six kilometers north of Mertoutek. Abandoned. There remain a few palms and fig trees as reminders of a former prosperity.

Other agricultural centers

Silet (altitude: 775 meters)

Located 151 kilometers from Tamanrasset on the road to Tin-Zaouaten. The Silet wadi forms a large basin which receives the waters of the Tahelra. There is a very shallow water table, which makes it possible for palms to grow without irrigation. There are about 6, 000 palms which receive practically /196/ no care. Artificial fecundation is rarely practiced. This palm grove was created about 200 years ago by Arabs from the Tidikelt. The owners of the palms are some Kel Rela, Iklan Taoussit, and Dag Rali. An attempt to establish a palm grove has been made by the Annex with djebars of Téguezza.

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/196 cont./ Some ten residents live at Silet and cultivate small gardens irrigated by three foggara. A bordj. Ruins of an old Arab fort. Numerous pre-Islamic tombs.

Tibeghim

Five kilometers from Silet. Small palm grove in a semi-wild state, which gives it a very picturesque appearance. The palms belong to the Kel Rela and the Iklan Taoussit.

Aïtoklane

Center located in the Sersouf wadi 40 kilometers south of Tazerouk. Long abandoned, now cultivated. Far from the automobile roads, this center is rarely visited. The cultivable area is great.

Tin-Tarabin

In the Tin-Tarabin wadi, away from the automobile roads, this center is rarely visited. Abandoned, then revived a short time ago. This center could prosper, for the cultivable area is large.

Tadjmout

Located on the road from Tamanrasset to In-Salah in the intra-tassili depression of the Mouydir tassili. A few gardens belonging to the Kel Immidir. Palm trees (about 100 grow freely in the gorge one kilometer from the road).

Izghan -- Izeghaf -- Djoraf

Abaondoned centers in the interior of the tassili massif. Numerous palms belonging to the Kel Immidir and the Kel Ahnet. These sites are never visited and remain unknown to all.

Tin-Teredjine

Upstream in the Teredjine wadi (In-Guezzam road). Tiggert, abundant water, abandoned garden. Tomatoes /197/ grow without being cared for. An Adjouh n'Téhélé family gathers them from time to time.

Inroudiden

In the Tahelra massif (south of Tiffert), in the Inozzorou wadi, a tributary of the Tinef. Owners: Iklan Taoussit. Unimportant.

Isernan and Sédéouen

During rainy years, gardens are established upstream from the tiggert in these two wadis, tributaries of the In-Dalag wadi.

6:Blanguernon Y-5 (1937-1954) 1955 MS25 Tuareg MS25
Hoggar

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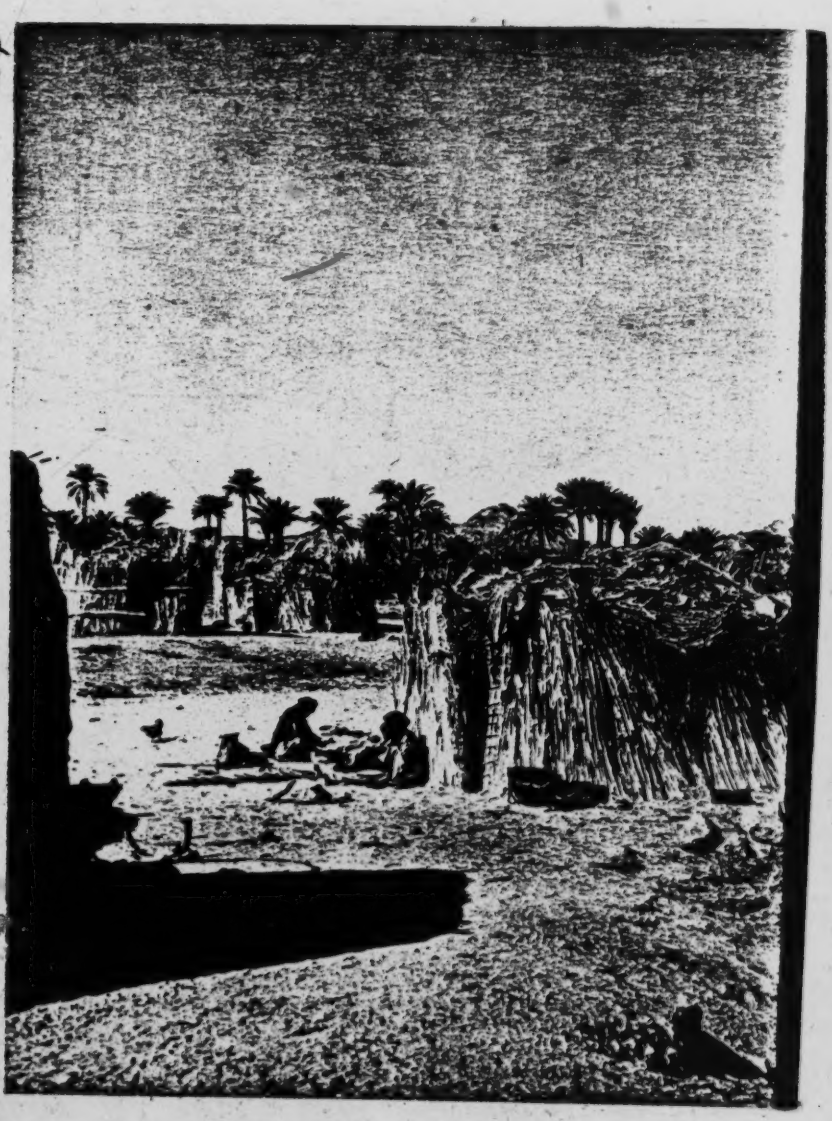

31. Zériba in the Ideles oasis.

[p. 218]

6:Blanguernon Y-5 (1937-1954) 1955 MS25 Tuareg MS25
Hoggar

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36. At the Ideles oasis. At right a butter container (tahtint).

[p. 22]

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

564 region until about a hundred years ago. During the reign of the Ahaggar *Amenukal Elkhaj Akhmed*
[163] (1830–1877) black-skinned agriculturists of the Tidikelt oases immigrated to Ahaggar to cultivate
[567] gardens on behalf of the pastoral Tuareg. The agriculturists of Tidikelt when settled in Ahaggar were joined by many Tuareg slaves (*Iklan*) who are now free and known as *Izeggaren*, or *Ḥarratin*, like the
[191] immigrants. People of this particular caste, as a result of its mixed origin, are frequently bilingual, speaking Arabic as well as Tuareg language (*tamahaḳ*). The *Izeggaren* (*Ḥarratin*) are generally less
[142] negroid than the slaves. They are racially very mixed and many of them have certain europid features.
[142] Their skin-colour is less frequently black than dark brown, and the name *Izeggaren* (sing. *Azeggar*) refers to that particular colour. An agricultural caste identical with that of *Izeggaren* does not seem to exist in other Tuareg groups, but a negroid agricultural population of the Rat oasis known as *Ikewweren* apparently has much the same status. A few families of the agriculturists living at Abalessa in Ahaggar claim descent from *Ikewweren* immigrants.

[361] *Kel Ĝanet* (sing. *W' Ĝanet*). This word refers to the inhabitants of the Ĝanet (Djanet) oasis in Tasilé-
[144] n-Ajjer. The population of this oasis is a very mixed one. Negroid types are prevalent but fair-skinned
[565] europid types are not uncommon. In Tasilé-n-Ajjer the *Kel Ĝanet* have much the same position as Tuareg vassals (Imṛad), while in Ahaggar, where there are *Kel Ĝanet* immigrants, their status is rather
[567] like that of other sedentary agriculturists mentioned above. In their homeland the *Kel Ĝanet* may possess slaves like other Tuareg vassals, but those living in Ahaggar are never slave-owners.

564 *Ineden* (*Ineden* in Ahaggar) (sing. *Ened*). These are the blacksmiths who are found in all Tuareg
326 groups. They form a very important caste as Tuareg craft is little developed. The Tuareg obtain their weapons and many other implements from the blacksmiths who also make silver ornaments for Tuareg women. If it were not for the blacksmiths the Tuareg material culture would indeed be a poor one. People of the other black-skinned castes are also highly dependent upon the blacksmiths who make hoes, sickles, and the like. In the two groups of Northern Tuareg there are very few blacksmiths – only
[162] a few families who live in agricultural settlements. In Southern Tuareg groups blacksmiths are very numerous, and many of them lead a pastoral life similar to that of the true Tuareg. The origin of the
564 blacksmith caste is unknown. Many blacksmiths claim their ancestor or patron saint to be *Sidna*
173 *Dawud*, that is "Our Lord David", who is said to have lived in an eastern country near Mekka. This myth intimates Jewish descent and it is a fact that there are many Jews among smiths and goldsmiths in Northern Africa and in the Middle East. This is well documented in literature (cf. Nicolaisen 1963). A relationship between Tuareg blacksmiths and Jews is also in accordance with two traditions told about the immigration of blacksmiths to Tuareg countries:— 1) According to a tradition collected by Lhote, the blacksmiths descend from Jews who originally lived in the oasis of Tementit in Tawat. At the end of the 15th century they were driven southwards by the Arabs (Lhote 1955a, p. 210 f.). 2) A tradition collected by Foucauld claims the blacksmiths to be Jews from Morocco. They followed Berber-speaking tribes from that area on their southwards migration along the Atlantic coast (Foucauld 1951–52, III, p. 1300). These traditions are interesting and they do not disagree with the fact that most blacksmiths among the Northern Tuareg comparatively recently have immigrated from Ayr and
564 Adṛaṛ-n-Foṛas. It is difficult to state the original racial position of the blacksmiths. Though most of
144 them are predominantly negroid there are also rather europid types among them, and Tuareg of Ayr

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

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Fig. 27. Zebu ox of the long-horned Fulani breed. Ayr, Agadez.

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Fig. 28. *Iforas* boy riding a young ox. Ahaggar, Tamanrasset.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

p. 93 ff.), and this seems to be true partly also of the so-called Watusi-cattle and related breeds, which have been mixed with zebu-cattle and therefore frequently have well developed humps (cf. Adametz 1920, p. 10 ff.; Faulkner & Epstein 1957, p. 148 ff.; Johst, McLaughlin & Phillips 1957, p. 146, 178, 259).

Adametz believes that zebus were introduced into Africa from Northern India about 2000 B.C. (Adametz 1920, p. 10 ff.). Nowadays Zebus no doubt form the most important types of cattle in Africa, and Tuareg cattle are of the zebu type. The West African zebus fall into a number of sub-breeds described in detail by Doutressoulle. The zebu type found in Ayr and adjacent regions and also introduced into Northern Tuareg country is known as the *Azawaɣ* breed (Doutressoulle 1947, p. 102 ff.). In Southern Ayr, which nowadays has a fairly large population of pastoral Fulani, a particular type of zebu is also very common. This zebu is characterized by very high stature and extremely long horns often resembling the form of a lyre (Fig. 27). This breed is named Borodji, Bororo, or M'Bororo. The Fulani zebu is esteemed by certain Ayr Tuareg because of its fatter milk, but it is claimed that its meat is not so delicious as that of their own cattle.

Pastoral Tuareg of Ahaggar and Tasilé-n-Ajjer do not breed cattle (zebus), which do not thrive in their barren countries where pastures of annual plants do not regenerate annually. An attempt to breed zebus among the pastoral Ahaggar Tuareg some years ago failed, and zebus are nowadays found only among settled agriculturists who use these animals as draught-animals at irrigation wells (p. 189; Fig. 132 a–b). A few agriculturists also have cows to raise calves, and to utilize their milk. It is comparatively easy for settled agriculturists of Ahaggar to keep cattle. In dry years, and when pasture is scarce and dry in the hot season, cattle can be fed on vegetables and the straw of certain plants grown in the garden. It can also be mentioned that many agriculturists live in the very broad river valleys of lower Ahaggar where water is not very deep under the sand, and at some agricultural settlements there are even permanent springs. In such places (e.g., the settlements of Abalessa and Amsel) there are even in dry years fresh grazing of a few permanent plants suited to cattle, notably the four following species:— *tahlé* (*Typha elephantina*), *tésengeli* (*Saccharum Ravennae*), *ilegga* (sing. *aleggi*) (*Scirpus Holoschoenus*), and *tayserst* (*Eragrostis bipinnata*). The regeneration of these plants is not dependent upon annual rainfall, for the soil is always sufficiently humid for their annual regeneration. Therefore it is very common in Ahaggar (e.g., at Abalessa and at Amsel) to burn down the old dry plants late in winter so that new fresh plants can germinate in spring. This method of renewing pasture by the burning down of old dry plants is not generally possible in desert countries. In Ahaggar it is practised only for the four above mentioned species within very limited humid areas, and the method is said to be entirely unknown in Ayr.

The Ahaggar agriculturists who possess oxen very frequently use these animals for riding, sitting on the hind part of the animals which are kept under control by means of a rein (*taẓerkit*) placed through their nostrils, or by means of a halter. No saddle is used apart from a casual piece of cotton, or a blanket (Fig. 28). In Tasilé-n-Ajjer, it is said, the settled farmers have no cows but only bulls and oxen to be used at irrigation wells, and these animals are not used for riding as in Ahaggar.

The zebus found in the settlements of northern agriculturists are all introduced from the south where conditions for ox-breeding are much more favourable. Many, and perhaps most, northern zebus have come from Ayr from which region they are still introduced to Ahaggar and Tasilé-n-Ajjer.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

Each of the three vegetational zones of Ahaggar has its advantages and disadvantages. If we consider a good year when rain has fallen abundantly with a resultant regeneration of all fodder plants, the *Atakor* zone has very excellent pasture. For the plains and the stony mountain slopes are then entirely covered with annual plants which by the Tuareg are considered the very best fodder. The Tuareg also claim that the upper mountain zone is preferable because of its cooler climate, which has a beneficial influence on the lactation of domestic animals. The disadvantage of the *Atakor* zone is the lack of acacias to which can be added the scarcity of fuel. The *Tarayin* zone possess characteristics of the *Atakor* zone and of the *Abada* zone. The *Abada* country is botanically very different from *Atakor*. It has annual pastures of great value when abundant rainfall has been experimented and it also has valuable pastures of perennial plants. With heavy rain the *Abada* country is excellent for stock-breeding, and fuel can be found everywhere. But the Abada country is hotter than are the zones of *Tarayin* and *Atakor*.

If rain falls abundantly all over Ahaggar there is good pasture in all three zones. But rainfall is more frequent and heavier at high altitudes than in the *Abada* zone, so that *Atakor* normally has by far the best pasture of annual plants which spring up late in summer or in autumn. The *Abada* zone on the other hand has the very best pasture of perennial plants, notably acacias that grow around the lower parts of the valleys which are always flooded when it rains in the high mountains.

The fluctuations of plant development determine the nomadic migrations of the Ahaggar Tuareg. A few tribes have their normal grazing grounds in *Atakor* (e.g., the *Dag Ḳali* and the *Kel Tazulet*). They camp in this zone at most seasons to let their goats and sheep feed on fresh and dry annual pasture. In dry years and during the hot summer season they may move to the *Tarayin* zone where there are perennial fodder plants, but they rarely camp in the *Abada* country. Many tribes have their normal grazing grounds in the *Abada* zone (e.g., the *Aguh-en-tehlé*, the *Ayt Lowayen*, the *Iheyawen Hada*, and the *Kel Ḳela*), but move to the *Atakor* when annual pasture is good in this region. They live in *Atakor* with tents and flocks when annual plants are green, while the rest of the year they camp in the *Abada* country to let their animals feed on acacias and other perennial species. Finally there are two tribes (*Tégehé-n-Efis* and *Iklan-en-tawsit*), the members of which camp in the *Abada* country all the year round even when rich annual pasture is found in *Atakor*. However, members of these tribes may send their camel herds to the *Atakor* zone, accompanied by herdsmen, while tents and flocks remain in the lower country.

With the exception of a few noble households which keep up their old tradition to subsist largely on camel's milk, the Ahaggar Tuareg do not keep their she-camels in Ahaggar unless there are excellent pastures of annual plants in this area. They take their camels to pastures far away from Ahaggar, notably to the Tamesna region where they have their animals guarded by herdsmen who are frequently slaves. In very dry years there are very few camels in Ahaggar – just the animals needed for riding and transportation. It is in fact very easy to take camels to distant pastures, and it is most necessary to give these animals the utmost care as they are most valuable and their breeding is a very slow process (cf. p. 56). Goats do not need such excellent fodder as do camels. They can eat almost everything, but in dry years goats may also suffer severely from lack of suitable fodder. This was the case in the year 1954/55 when I stayed in Ahnet and in Ahaggar. In the small camps of three to four tents each it was

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

Fig. 98. A slave watering goats by means of the leather bucket called *aga*. Water is drawn from a well and poured out into a hole dug in the clayey ground. The goat standing to the left is sheared – a token of the summer season. Tasilé-n-Ajjer.

conditions, and herdsmen, who live with camelherds far away from camps and wells subsisting on camel's milk, do not consider water necessary. Should domestic animals have eaten salt or salty plants they are very eager for water even in winter. When I lived in Ahaggar with my camels during the winter 1954/55 they had rightly to be watered every ten days, but in regions where they fed mainly on saliferous plants they had to be watered more frequently. However, domestic animals must not be watered too often as this would make them slow and emaciated, and a camel must not be worked too hard the day after it has been watered.

Tuareg camps are always found around wells, pools, or other types of water places for which there is a large vocabulary. But the Tuareg never camp too close to water places where there is little pasture, many foreigners and consequently little peace. The distance from camp to water place varies, but is very frequently 1–3 kilometres. During the rainy season (*akasa*) water is very aundant all over Ayr, but outside this period conditions of water supply for human beings and livestock are more favourable in the north than in Ayr, where water most of the year must be drawn from wells. To raise water the Tuareg use a leather bucket known to the Ahaggar Tuareg as *aga* (Fig. 97–98). The water drawn for the animals is poured out into a hole dug in clayey soil, or into a hole covered with a piece of skin or leather known in Ahaggar as *tafarawt*. This skin is nowadays frequently substituted by canvas (cf. Fig. 99). Where water is scarce and must be drawn from narrow wells, as in Ayr during the summer season, the watering of flocks and herds gives rise to frequent quarrels between pastoralists. For though the right to the use of wells is free to all there are many disputes and fights frequently

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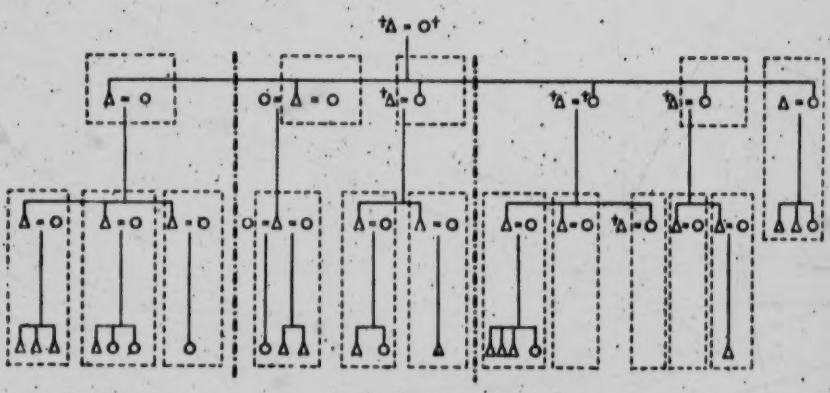

Fig. 105. The section camp of the *Kel Ayrraen* (the *Isandan* sub-tribe of the *Ajjeh-en-tehli*). The camp comprises three goat-herding units of four, five, and seven tents forming three independent camps in case of dry pasture. When grazing is good the three goat-herding camps which co-operate in camel-herding and caravan trading will camp on the same spot with a small distance between each in order that the flocks of the three units shall not mix. The household to the extreme right does not follow the general rule of residence illustrated Fig. 103. Its members accordingly should camp together with the husband's family, which, however, lives in Ayr whence he has emigrated to Ahaggar.

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614 also the representative of the section towards the tribal chief, should preferably be elected. The members
613 of one section will frequently intermarry with members of another particular section, but members
621 of a section will generally marry into more than one particular section and sometimes into sections
[592] of foreign tribes.

613 When grazing is good the sections are identical with camps of 10–20 tents, which otherwise are
621 split up into minor camps of 2–7 tents. These minor camps generally consist of an extended family
596 which co-operates in goat-herding and in various other tasks, although all animals are individually
*233 owned and every tent or household is self-supporting – "it has its own churning bag and its own millet
[592] bag", as the Tuareg put it. The section camps formed during good grazing are made up of three or four small goat-herding camps which constitute extended families, but the small camps within the section camps remain co-operative in goat-breeding, and there is generally a distance of 50–100 metres between each in order that their flocks shall not mix. When the small goat-herding camps of a section join each other and form bigger camps under favourable grazing conditions, it is not only because kinsmen appreciate each other's company, but also because the big camp of a section is a co-operative unit in camel-breeding and caravan trading, for which tasks a goat-herding camp cannot spare the labour. Should the small goat-herding camps of a section be unable to remain together, they camp so close to each other that contact between them is comparatively easy. A section camp is illustrated in the diagram below (Fig. 105). The formation of such camps is not generally possible without annual pasture, and section camps are particularly common in the *Dag Rali* tribe resident mainly in the

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Fig. 106. A small goat-herding camp of three related households. The inmates have not erected their skin tents, but have their luggage and their household utensils hanging upon posts (left). In the hot daytime the people live in the shade of the rock (right). Ahaggar (the *Atakor* zone), the *Dag Rali* tribe (the *Kel Tamanṛaset* section).

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Fig. 107. A camp of four skin tents. Tasilé-n-Ajjer, the *Uraṛen* tribe.

361 *Atakor* zone. In this area kin groups of five or six generations, comprising about twenty tents, may
621 form a section camp for long periods. Thus I was told that all members of the *Kel Tamanṛaset* section
*233 camped together in the same place for eight months of the year 1952. Among the Tuareg, who have their grazing grounds mainly in the *Abada* country, section camps are not so easily formed as annual pasture springs up less frequently. People of such tribes as the *Iklan-en-tawsit*, the *Tégehé-n-Efis*, and part of the *Aguh-en-tehlé* tribe, generally live in goat-camps, which are often smaller than those of the
824 *Dag Rali* tribe of the *Atakor* region. Where goats feed mainly on acacias it is not possible to keep such large flocks together as when grazing consists of fresh or dry annual plants. Acacia leaves are very important for fodder and their fruit-pods are still more valuable, but the trees grow scattered and consequently fodder is not so concentrated. We see again how stock-breeding among the Ahaggar Tuareg is an industry adapted to environment. The size of camps is determined by natural conditions.

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Sub-areas of the territory of the Dag Ṛali tribe

(The tribe is divided into two halves:— (1) the *Dag Ṛali* proper comprising the sections named *Kel Tamanṛaset* and *Kel Terhenanet*, (2) the *Imessiliten* comprising the two sections named *Kel Hérhafek* and *Kel Teñhart*)

Tenants	Name and value of sub-area	Annual land-rent to the *Amenukal*
DANGUCHI, chief of the tribe and leader of the *Kel Tamanṛaset* section	ISEKRAM Hunting of barbary sheep. For every four or five barbary sheep killed one is given to the tenant	2 goats
YEḴI of the *Kel Tamanṛaset* section	TAĜMART No particular value	2 water bags 1 rope of goat's hair
AMMA of the *Kel Terhenanet* section	AṚECHCHUM No particular value	2 water bags 1 rope of goat's hair
KHABTÉ of the *Kel Tamanṛaset* section & AKHASEN of the *Kel Terhenanet* section	I-N-DALAĜ Hunting of barbary sheep Wild donkeys	1 donkey
AFAREḴ of the *Kel Hérhafek* section	AKAL-ERERẸN Hunting of barbary sheep	Unknown
BUSKEYAS & DEMONI, two brothers of the *Kel Teñhart* section	TAHAT Important hunting ground for barbary sheep, which are protected for three months annually. Domestic animals never graze in this sub-area	Formerly three barbary sheep (present rent unknown)
[361] DANGUCHI, chief of the tribe representing the two sections *Kel Tamanṛaset* and *Kel Terhenanet*	ABALESSA A very extended area comprising the village of Abalessa and other agricultural settlements	No land-rent as the *Amenukal* receives dues for every garden in this area
DANGUCHI, chief of the tribe representing the two sections of *Kel Tamanṛaset* and *Kel Terhenanet* Land-rent is paid collectively by members of the two sections	ṬEẒẒA Important hunting ground for barbary sheep, which are protected for three months annually. Domestic animals never graze in this sub-area	1 donkey (formerly four barbary sheep). (In this particular case an annual land-rent comprising two hides of barbary sheep (formerly two barbary sheep) are also given to Danguchi as tribal chief)

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Sub-areas of the territory of the Aǧuh-en-tehlé tribe

(The tribe is divided into three sub-tribes named Kel *Taṛhawhawt*, *Isandan*, and *Kel Aṛefsa*)

Tenants	Value of sub-area	Annual land-rent to the *Amenukal*
SAMA ALATOKH, chief of the *Aǧuh-en-tehlé*, chief of the sub-tribe *Kel Taṛhawhawt*, leader of the section *Kel Twes*	Cultivation grounds at Taṛhawhawt and I-n-dalaǧ Hunting of barbary sheep Wild donkeys for domestication	2 donkeys
OMANA, *khalifa* (leader) of the *Ikenkeren* section of the sub-tribe Kel *Taṛhawhawt*	Hunting of barbary sheep Collecting of wild seeds	3 goats
ABERĠALI, *khalifa* of the *Kel Tarayin* section of the sub-tribe *Kel Taṛhawhawt*	Hunting of barbary sheep	2 goats
KHOFA of the *Kel Tarayin* section. No position as leader	Cultivation grounds at I-n-aǧriwal and I-n-dalaǧ. Hunting of barbary sheep. Wild donkeys	2 donkeys
DEYNI, chief of the *Kel Aṛefsa* sub-tribe forming only one section	No particular value	No land-rent
AKAWALI, chief of the *Isandan* sub-tribe and leader of the *Kel Afaṛa-ha hin* section	Cultivation grounds at Tahifet Hunting of barbary sheep Wild donkeys	1 donkey
HANU, *khalifa* of the *Kel Azernen* section of the *Isandan* sub-tribe	Cultivation grounds at Tamanṛaset In the past wild donkeys	1 donkey
KHOSENI, *khalifa* of the *Ṛelayddin* now attached to the *Aǧuh-en-tehlé* tribe	*Khoseni* is in command of the *Ṛelayddin* territory to which all members of the *Ṛelayddin* have equal rights. Each of them gives two goats annually to the *Amenukal*	

The Ahaggar Tuareg have various terms to indicate the size of a camp. A large camp is always known as *amezzaṛ*, while a small camp is called *ǧrewen* or *tamezzaḳ*. These two terms are used to distinguish between goat-camps and section camps (camel camps) though they do not have so absolute a meaning. Two camps placed close to each other (100–200 metres between them, whether of the same tribe or not) are known as *hereǧen* (or *amezzaṛ n hereǧen*) and a camp very far from wells or water pools is called *aharaǧen*. Apart from the migrations between the *Abada* and the *Atakor* zones and those beyond Ahaggar in case of severe drought, nomadic migrations of the Ahaggar Tuareg are not very extensive and occur within a limited area. The Ahaggar Tuareg are not "grands nomades" like

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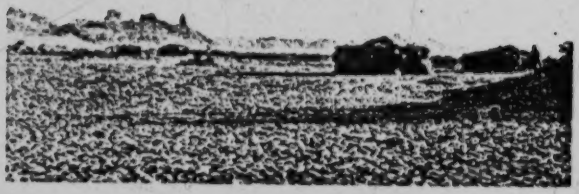

Fig. 108. A camp of two related goat-herding units with their straw-huts (*ikebran*, of the cylindrical type) placed at a certain distance from each other in order that the two flocks shall not mix. Tasilé-n-Ajjer, the *Kel Uhet* tribe (*Imkkemaren*).

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224 the head, and half the meat (Lhote 1955a, p. 284), but for certain hunting grounds there are different rules (cf. list p. 148).

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241 (4) The tenants have the right to dues from the crops of every garden in their sub-areas, but for sub-areas of the *Dag Rali* tribe these payments are now given to the *Amenukal* because, it is said, the *Dag Rali* Tuareg consider such dues incompatible with Islamic law. In the *Aguh-en-tehlé* tribe the tenants receive 10 kg per garden from a crop of wheat and barley (grown in winter), 10 kg from a crop of millet (grown in summer), and 4 kg from a crop of tomatoes.

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643 Should the rights of tenants be violated, the offenders will be fined by the *Amenukal*, the indemnity falling to him and not to the tenant. In the past there was a fixed indemnity of three goats for the
423 violation of protected pastures. Nowadays the price is determined by the *Amenukal*. When a tenant
[422] dies his rights and obligations should preferably be taken over by a maternal kinsman. Traditionally
613 the usufructs of a sub-area are reserved to people of the same section as the tenant, but should the tenant be identical with the chief of the whole tribe they belong to all tribal members. These traditional rules, however, do not seem to be observed very strictly nowadays except for the hunting of barbary
[114] sheep in certain areas. Lhote seems to be wrong in stating that the chief of the tribe has the right to forbid grazing and protect pastures in the whole tribal territory (Lhote 1955a, p. 279). In the two tribes here described this right is invariably vested in the tenants of sub-areas.

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* 233 The Ayr Tuareg follow the Islamic rules of inheritance described from Ahaggar p. 137 f., and property
[422] marks as in Ahaggar are patrilineally inherited in the way that people take over their father's mark. However, property marks play a less important role in Ayr, where the Tuareg with the exception of the *Igdalen* Tuareg (vassals) do not mark goats, sheep, and cattle. Other tribes of Ayr mark only camels and donkeys, and branding with a redhot iron as well as earmarks cut with a knife are used for these animals. Both types of marks are known as *éjwel*. Some Ayr Tuareg and all Tuareg of the *Kel Geres* group use brands for camels and donkeys, and this seems also to be the case with the
[113] *Iwillemmeden Kel Dennek*. Some of the brands used among the *Kel Ayr* are published by Rodd and Nicolas (Rodd 1926a, pl. 21 p. 195; Nicolas 1950a, p. 268 f.). The earmarks used for camels and

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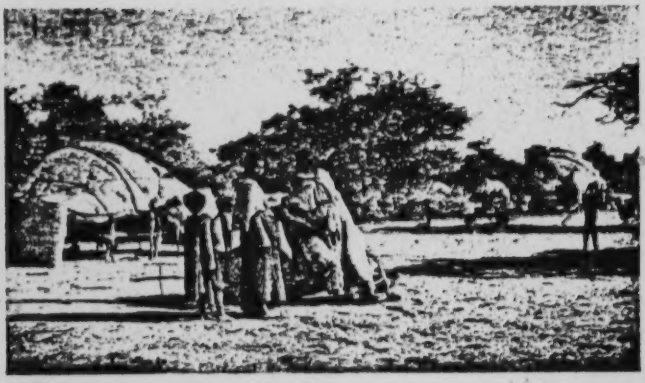

Fig. 109. A family camp of four mat-covered barrel-vaulted tents. Ayr, the *Igendéynen* tribe.

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* 233 donkeys by certain Ayr Tuareg are most interesting. Though such marks are used by many tribes there does not seem to be a great variety of them, and I have noted only the following marks:—

[565] (1) *tallayt*, that is the tip of right ear cut off while a slit is cut into the left ear. This mark is said to be used by all vassals of the *Kel Ferwan* group, but the members of the two tribes *Kel Akerra* and *Imezzureg*, who claim to be noble by origin, have an additional brand burned into the left hind thigh close to the animal's anus. This brand is called *ekomed*.

(2) two slits in the animal's left ear. Though different from the mark just mentioned it is said also [565] to be called *tallayt*. It is used by the noble *Kel Ferwan* Tuareg (the *Irawatten*), and also by the negroid *Irawélen* who in the past were once slaves of the nobility.

(3) *tabelechchat*, that is one slit in the left ear. This mark is used by the *Ikezkezen* Tuareg who are politically attached to the *Kel Ewey* Tuareg.

[428] Though all property marks are patrilineally inherited it may happen in Ayr, as in Ahaggar, that a [777] Tuareg use two marks. For certain Tuareg will use the mother's father's mark for animals given them by their mother's family, other Tuareg have been brought up among matrilineal kinsmen whose mark they have adopted, and there are also people who have adopted their mother's family mark because they believed that their father's mark brought them bad luck in camel-breeding.

614 The Ayr Tuareg of the *Kel Ferwan* group fall into a number of units which are known by the word *tawchit*. It seems to have much the same meaning as the word *tawsit* of Northern Tuareg dialect, but is also used to designate the so-called spiked wheel-trap. I call these units for tribes as they do not seem to correspond to unilateral descent groups. Many tribes have a tradition of their descent from a common ancestress, but though tribal members may know her name they are never able to connect her with their genealogies which are very badly known. To my knowledge there are no tribes of true Ayr Tuareg that are named after an ancestress or have avuncular names. The Ayr tribes have geographical names or are called after an ancestor to whom they are also unable to connect their [59] genealogies. It is possible that the *Kel Ferwan* Tuareg in the past have followed the rules of residence

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outlined above from Ahaggar, with the exception that the Ayr Tuareg have never practised the one year's stay in the bride's family camp after marriage. To-day the *Kel Ferwan* tribes of Southern Ayr do not follow very strictly any particular rule of residence. There is a strong tendency to patrilocal residence, but a man will usually continue to live with kinsmen of the camp where he was brought up as a child. If a man has grown up with maternal relatives owing to the loss of his father as a boy, or because his mother and father have divorced, he may remain with matrilineal relatives. I believe that all tribes of the *Kel Ferwan* group of Southern Ayr are bilateral kin groups. And if in the past these Tuareg practised the rules of residence outlined above from Ahaggar, the tribes have been bilateral units as there have always been many marriages contracted between people of different tribes. Two tribes of Ayr, namely the *Imezzureg* and the *Kel Akerra*, claim that they have intermarried regularly from very ancient times, because the father of the *Kel Akerra* tribe was the brother of the mother of the *Imezzureg* tribe, while the father of the *Imezzureg* was a cross-cousin of *Kel Akerra*'s mother. These two tribes possess their individual chiefs, but have always been very mixed. It seems as if chiefs were elected according to matrilineal rules in the past, but to-day it is claimed that a son of a deceased chief should be the first in line of succession (cf. p. 456 ff.).

In Southern Ayr camps of all possible tribes to-day live among each other. There are no grazing grounds or particular territories nowadays when everybody is free to go where he likes with flocks and herds. No Tuareg have particular rights over land, and ban on grazing within certain areas, as in Ahaggar, is unknown. This is said also to have been the case in the past. But in the times preceding the French occupation of Ayr, all vassal tribes had their particular territories which, according to Capot-Rey, were formerly marked by walls (Capot-Rey 1953a, p. 265). I have not been able to confirm this, but the Tuareg told me that in the past tribal territories had frontiers marked out by river valleys or by natural objects such as large trees. The vassal tribes did not own these territories, which were allotted them by the drum-chief of the noble *Kel Ferwan* tribe, the *Irawatten*. The traditional territories or grazing grounds of most *Kel Ferwan* tribes are indicated in the list on p. 423 ff.

At present there seem to be no sectional division of the *Kel Ferwan* tribes corresponding to the division into sections in Ahaggar. The *Kel Ferwan* Tuareg generally live in small camps comprising a few tents. These camps, which co-operate in stock-herding, do not generally exceed four or five tents inhabited by kinsmen who generally constitute an extended family, e.g., (1) husband, wife, married sons, and their children; (2) two brothers, their wives, married sons, and their children; (3) a brother and a sister together with their spouses and children; (4) husband, wife, unmarried children, husband's mother and mother's sister, and his sister's daughter with her husband. These small camps, as may be seen, are not based upon any particular rule of residence in agreement with what has been said of residence rules above. The households of a little camp of this kind will remain constantly together to co-operate not only in goat-herding, but generally in camel-breeding also. The labour for camel-herding and caravan trading is more easily provided for in Ayr than in Ahaggar. For camels are rarely taken to very distant grazing grounds, and caravan trading is often limited to expeditions to Damergu where the Tuareg fetch their millet. The Tuareg tribes of the *Kel Ferwan* group living around Agadez have no true co-operative units apart from the small camps of up to four or five tents. Such small camps of extended families may temporarily join each other in a bigger camp during the

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

361 621 *akasa* period when there is green annual pasture, but the large camps have no co-operative functions and no particular leader. The small camps join together to form big camps because their members are linked to each other by bonds of kinship, and consequently like to come together.

361 221 Most of the year the Ayr Tuareg live in very small camps around wells, and certain camps remain on almost the same spot throughout the year. However, most camps move about in the *akasa* period, and later, at the end of the rains, many camps move southwards and westwards to the salt plains of Azawagi.

DIVISION OF LABOUR IN STOCK-BREEDING

462 Before we consider other activities, we shall briefly describe the division of labour in stock-breeding according to sex.

462 565 [567] In all Tuareg groups noble women do very little work. They engage in a few very esteemed crafts such as embroidery, neat decoration of leather work, and in the north they cut ornamented milk-bowls from wood. The true domestic duties of a noble household are performed by slaves. This to some extent is also true of other social classes among the Northern Tuareg, while the Ayr Tuareg vassals have very few slaves nowadays. But even in vassal camps among the Northern Tuareg women have their duties and engage in all kinds of domestic work, also in stock-breeding. In the two groups

462 *233 342 [565] of Northern Tuareg the division of work in stock-breeding can be seen when one enters a tent of a vassal camp:—

One half of the tent (the left part) is occupied by the woman and contains such implements as are connected with tanning, leather-work, cooking, butter- and cheese-making, and generally all implements connected with the breeding of goats, sheep, and donkeys. The other half of the tent (the right part), occupied by the husband, contains saddles and all other objects connected with camels. The tending of goats, sheep, and donkeys is the task of women, while camel-breeding is the business of men.

462 *233 [857] Before initiation Tuareg boys may be occupied with herding goats, sheep, and donkeys, but when they have adopted the veil they should preferably take care of camels only. There are, however, a few occasions where men engage in tasks connected with goats and donkeys:—

Goats like any other animal can be killed only by adult men, who also undertake the skinning and partition of the meat.

Castration of he-goats and rams may be done by men, but it is said that it is also performed by women.

When goats suffer from certain diseases they may in a few very special cases be taken care of by men. Thus when a goat has broken a leg and wooden splints are applied to the fracture this is generally performed by the husband of the household to which the animal belongs.

When goats and sheep are lost in the desert they may be searched for by men mounted on camels.

On the whole there are not many situations where the assistance of men is needed in tending goats and sheep, and most men have so little to do with goat-breeding that they do not know the exact meaning of many colour terms for goats.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

In literature there seems to be no reliable information about the existence of irrigation agriculture in Ahaggar until Duveyrier, who states that agriculture did not obtain a fixed position in the economic life of the Ahaggar Tuareg until the reign of the *Amenukal Elkhaj Akhmed* (1830–1877) (cf. Duveyrier 1864, p. 369). This statement is confirmed by most agriculturists and pastoral Tuareg in Ahaggar, who claim that prior to *Elkhaj Akhmed* irrigation agriculture was not practised in Ahaggar. During the reign of this *Amenukal* irrigation agriculture by means of the subterranean aqueducts known to the Arabs as *foggara* (*éfeli*, pl. *ifelan*) was introduced by *Ahl Azzi* Arabs and negroid *Ḫarratin* from the Tidikelt oases. Some people of Ahaggar claim that another irrigation system was introduced about the same time, namely irrigation wells from which water is drawn by oxen and donkeys. This system, known as *tanut*, is said to have been introduced by agriculturists from Ġanet (Djanet) (the *Kel Ġanet*). It should be noted that there are certain traditions which claim irrigation agriculture to be older in Ahaggar. One tradition says that it was practised at Silet-Tibeġhin by Arabs who immigrated from Tawat to cultivate by means of the *foggara* system even during the reign of the *Imenan* (Lhote 1955, p. 286 f.). Another tradition, recorded by Foucauld, states that irrigation farming was known at a very remote date by the *Isebeten* – a pagan people said to be the ancestors of the oldest vassal tribes of Ahaggar (cf. Foucauld 1951–52, II, p. 535 f.). Traditions of the age of irrigation agriculture in Ahaggar are conflicting. If it was practised long before the reign of *Elkhaj Akhmed* by the ancient vassals, I believe that water was raised by human power, namely by the pole and bucket provided with a counterweight. For this system, which is known as *arudid*, is said to have been very common in the past. It is extremely rare nowadys, and I have only seen it once at Terhenanet. There can be no doubt that this simple irrigation method is a very old one in North Africa, where it is more widely distributed than all other types of irrigation methods (cf. Capot-Rey 1953a, map VII p. 320). The very wide distribution of this system elsewhere in the Old World points to its great age, and it is perhaps to be considered the oldest true irrigation machine.

A few Tuareg in the northern groups practise irrigation agriculture, which does not seem to be one of their traditional occupations. Tuareg irrigation farmers are found mainly in the Fezzan, but mention should also be made of the people of three noble tribes, namely the *Ilemṭéyen* (living at Ṛat), the *Ikadeyen* (at Tit in Ahaggar), and the *Kel-ahem-mellen* (roaming pastoralists north of Ahaggar or settled farmers at the oasis of Inṛer in Tidikelt). These sedentary or semi-sedentary noble Tuareg were originally true pastoralists, though but little is known of the original mode of livelihood of the *Ikadeyen*. A few individuals or families among the Ahaggar vassals have more recently taken up irrigation agriculture in addition to stock-breeding. There seems to be a growing tendency towards semi-nomadism in Ahaggar nowadays. There may be several reasons for this. Thus one can point to the decline of caravan trading and to the fact that pastoral Tuareg cannot so easily get the true agriculturists to cultivate for them. The true agriculturists of Ahaggar comprise the *Ḫarratin* (*Izeggaren*) of Tidikelt, who have mixed with the manumitted slaves now also known as *Ḫarratin* (*Izeggaren*), a few fair-skinned *Ahl Azzi* Arabs, and the *Kel Ġanet* who are predominantly black-skinned. All these agricultural people tend to mix with each other and also with tribes of pastoral Tuareg.

There are at present about 25 agricultural settlements in the river valleys of Ahaggar. Apart from the administration centre of Tamanṛaset (1600) and the oasis of Abalessa (547) these agricultural

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

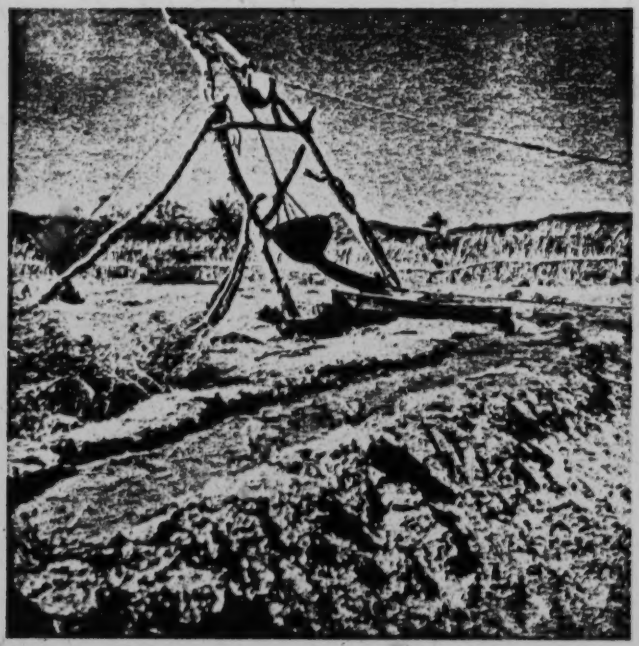

Fig. 132a. The irrigation system known as *tenar*. Ahaggar, Amsel.

settlements contain less than 300 individuals, the majority not even a hundred (cf. Lhote 1955a; p. 292). Most agricultural settlements comprise only a few houses built of stone or mud, or a few straw-huts (cf. p. 327 ff.). The agriculturists of these small settlements generally keep some goats and sheep, have donkeys, which are important beasts of burden to all farmers of the Sahara oases, and in certain families there are one or two zebus to raise water from irrigation wells. A few agriculturists may be characterized as semi-nomads. This is the case of some inhabitants of Abalessa who guard their flocks at some distance from the village. Some of these agriculturists, who were formerly Tuareg slaves, even make skin-tents like pastoral Tuareg.

The subterranean aqueducts known to the Arabs of the Sahara as *foggara*, to the Tuareg as *ifelan* (sing. *éfeli*), constitute by far the most important irrigation system used in Ahaggar. However, these *foggara* canals cannot be compared with the large extensive aqueducts of Tidikelt though their introduction to Ahaggar is due to the immigration of agriculturists from that area. The Tidikelt *foggara* are very large aqueducts which are dug into water-bearing strata which can be situated at a considerable distance from the oasis (cf. Capot-Rey 1953a, p. 324 ff., Lô 1953 & 1954; Chaintron 1958). The Ahaggar foggara are generally very short (about one to two kilometres, or shorter), they are not

7:Nicolaisen E-5 (1951-1962) 1963 · MS25 Tuareg MS25

obtain a larger amount of vegetable food products and more wheat and barley. The pastoral Tuareg gain less from their gardens than they did when the *khamast* system prevailed, but it is still profitable for them to be garden owners.

The quantity of agricultural products anually consumed per person among the *Kel Ahaggar* is estimated by Lhote at 187 kilos millet, 15 kilos dates, and a small amount of wheat for which no figure is given. For Arabs of the Sahara the quantity of vegetable food is estimated at 180 kilos wheat, and 75 kilos dates anually per person (Lhote 1955a, p. 263). I add to this that wheat is used for bread to a very large extent by the Ahaggar Tuareg, who also make much use of barley for bread and porridge. According to Malaurie the amount of agricultural food products available per person among the Ahaggar Tuareg is about 400 grammes a day, or 146 kilos anually (Malaurie 1953, p. 342). It should be noted again that the amount of agricultural food products necessary for a Tuareg household varies greatly from one year to the other. In years of drought when agricultural products form so to speak the only source of food for the nomads, they estimate that a household consisting of husband, wife, and one child will consume about two kilos of cereals (dates) every day, or 730 kilos in a year. Consequently the amount of cereals and dates consumed anually per person may in dry years rise to about 245 kilos. This seems to correspond to the amount of food considered necessary for Arabs of Tidikelt and Tawat, who live almost exclusively on cereals and dates. When employed as labourers by the French Administration these sedentary Arabs are given 16 kilos of wheat and 4 kilos of rice a month, or 240 kilos of agricultural products anually per person (Information obtained from the administration office of In Salah in 1954). The agricultural products obtained by a pastoral household from a single garden will not meet the needs of the household and its slaves even in years of good grazing, and less so in dry years when pastoralists subsist entirely on agricultural food products. I give an example: During the year 1954 55 which was extremely dry, a Tuareg who owned three gardens cultivated with an *afil* agreement could not feed his household and his slaves (comprising two men, two women, and three children from five to twelve years old) by means of his own garden products. The Ahaggar Tuareg depend on caravan trading for their provisions of agricultural food, and trading also helps them to create the capital of millet and dates which is invested in their gardens in Ahaggar grown on their behalf by agriculturists. I believe that most pastoral households of Ahaggar have gardens, but there are Tuareg who have none. This is true, for instance, of most Tuareg living in and around the Ahnet Massif. Tuareg of this region formerly had gardens irrigated by the *foggara* system at Abalessa, but to-day they acquire their vegetable food products mainly by caravan trading.

IRRIGATION AGRICULTURE IN AYR

The largest aggregation of sedentary people in Ayr is found in Agadez (4.737), which is inhabited almost exclusively by negroid peoples who speak Hausa though most of them also know the Tuareg language (*tamachek*). This large sedentary population mainly lives on trade and on crafts of various kinds. The inhabitants are known to the Tuareg as the *Imeggedezen*. They are said to be related to the Sultan (or the *Amenukal*) of Agadez. There is a tradition which claims that the Sultan came

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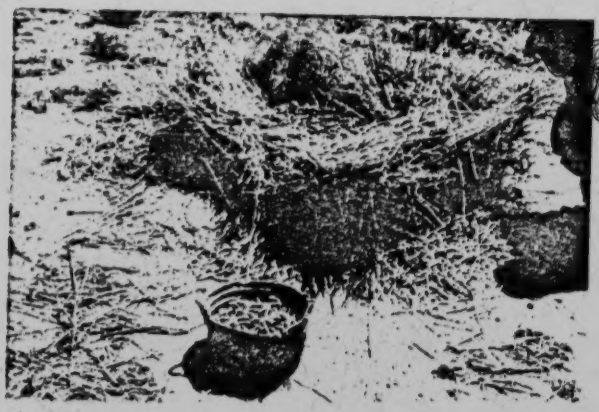

Fig. 142. Tomatoes (*tomatem*; *Solanum lycopersicum* and a type of melon (*tazenut*; *Cucurbita* sp.) cut into slices and left upon a layer of straw for drying. A basket (*tésenit*) filled with ears of millet (*énlil*) is seen in the front. Ahaggar, *Ahl Azzi* Arabs.

from Constantinople, and the true *Imeggedezen*, it is said, came from the same region. They were kinsmen of the Sultan who came to see their relative Sultan as guests or visitors and therefore acquired the name "*Imeggedezen*". They founded the city of Agadez, though it is said that sedentary people of the *Itésen* group of Tuareg were already living at this place. The city of Agadez seems to have been founded in the 15th century shortly after the foundation of the Sultanry which was established 1405 A.D. (cf. p. 414 f.). I shall return to the problems connected with the establishment of Agadez in a later chapter, and shall here content myself by saying that Agadez was established as a trading post, which also became the seat of government of Ayr, and the town never seems to have been a true agricultural settlement. There are no gardens, and even drinking water is very scarce and fetched by the women from outside of the city at wells and in river beds. The *Imeggedezen* are mainly city dwellers though there is a small population of agricultural *Imeggedezen* that possesses gardens at Alarses, a few kilometres north-east of Agadez.

In Barth's days the main language of the sedentary Agadez population was *Sonray* (Barth 1857, I, p. 504). This is still spoken by a few people within the city, and it constitutes the traditional language of the people inhabiting the oasis of Ingal (1.430) west of Agadez. These Sonray-speaking people of Ingal, known to the Tuareg as *Isaweren*, subsist mainly upon their palms which yield dates of an excellent quality, and they do not otherwise engage much in agricultural activity. In the winter season some of these people settle in Tegidda-n-tésemt towards the north to work in the salt pits. Trade and crafts are also important industries to the sedentary people of Ingal, which owns a market.

Throughout the Ayr Massif there are many agricultural villages in which the farmers live in straw-huts, and in houses built of stone and mud (cf. p. 327 ff., Figs. 246 ff.). Most people of these villages belong to the group of *Kel Ewey* Tuareg, but there are also some agriculturists who belong to other Tuareg groups, e.g., the *Itésen* (cf. p. 330, 412, 414, 417 f.). The *Kel Ewey* Tuareg originally came from the north as true fair-skinned Tuareg, but in Ayr they mixed with an ancient negroid and Hausa-speaking population that subsisted on agriculture.

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175 721 added that wars were not confirmed to fighting between these large political groups, for there was also fighting within these groups at intervals.

[648] [378] The Ayr Tuareg had as their main enemies the Tebu, the Eastern *Iwllemmeden* and the Arab pastoralists of the Tawa district. In Ayr there were also sharp disputes between various drum-groups of the Ayr federation, notably between the *Kel Ferwan* and the *Kel Faday*. The *Kel Faday* Tuareg frequently joined forces with the *Kel Dennek* in fighting the *Kel Ferwan*.

[437] Throughout the 19th century there was a risk of severe trouble everywhere in the Sahara with adjacent regions, but caravan trading was most important to Tuareg subsistence at that period in spite of these latent conditions of hostility.

175 437 Great caravans then crossed the desert carrying gold, ivory, ostrich feathers, and slaves from the Sudan to the Mediterranean, and south-bound caravans traded with salt and Arab and European goods. The Tuareg had their important part in these large trading expeditions, and they traded with their surplus of livestock and stock-breeding products much in the same way as they do nowadays. They acquired dates and millet from the sedentary farmers who were in constant need of meat, butter, cheese, and the like.

175 437 484 The organization of caravan trading among the Ahaggar Tuareg was different in the past. To-day the normal trading units are tribal sections, and this was probably also true in pre-European times, but these trading units did not travel independently as they do nowadays. Several tribes of the same drum-group travelled together under the leadership of a noble Tuareg of the dominant tribe of their chiefdom. When the Ahaggar Tuareg had no severe disputes with the *Ulad Ba Hammu* who dominated the Tidikelt oases, they traded with their population of sedentary farmers much as they do nowadays. [439] They brought livestock, butter, dried meat, and Sudanese goods which were bartered for dates and Arab goods. The Ahaggar Tuareg also traded southwards, but they say that they did not go further south than Agadez, as it was considered dangerous to penetrate too far into the Sudan. They also [438] say that they did not trade with salt until a few years before the arrival of the French, and that the important trading object before that time were donkeys, of which there was a shortage in Ayr. All [317] this seems to agree with Duveyrier's statement that the salt deposits of Amadror were not utilized in his time owing to insecurity, though he says that the deposits situated on the caravan road from Wargla to Agadez had formerly been mined (Duveyrier 1864, p. 143 f.). As to the caravan trade of the Ayr Tuareg, I believe that it was very much as it is nowadays, comprising trading expeditions to [361] [162] the millet-growing Sudan and to the Bilma oasis. It is most possible that the Ayr Tuareg also then travelled in larger units to protect themselves and their goods, for the *Kel Ferwan* Tuareg say that in the past camps were always bigger than to-day, as a camp consisting only of three to five tents could not defend itself against raiders.

175 567 [648] [171] It is known that the slave trade was carried on until the arrival of Europeans and in certain parts of the Sahara even later. Both the *Kel Ahaggar* and the *Kel Ayr* claim that they engaged in slave trading until it was abolished by the French authorities. However, it seems as if the Tuareg never engaged in this trade to the same extent as the Arabs. This is stated by Bissuel in regard to the Tuareg of Ahnet who bought their slaves from the market of Timbuktu. In general they kept these slaves for their own use, in contrast to the Arabs of Tidikelt who traded with slaves on a very large scale (Bissuel

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ago when the *Ḥarratin* agriculturists immigrated from Tidikelt. Most people even aver that there were hardly any houses in Ahaggar until the arrival of the French at the beginning of the century. This is confirmed by Foucauld (1951–52, II, p. 609), and Bissuel was told by the Tuareg captives at Algiers that Abalessa had no solid houses but only straw-huts (cf. Bissuel 1888, p. 53). It is true that Hornemann mentions a village comprising 25–30 houses built of stone and situated in the country of Hhagarâ (Hornemann 1803, I, p. 154 f.). But Hornemann travelled further east and never visited Ahaggar or Tasilé-n-Ajjer. His information may perhaps refer to a village in the latter region also inhabited by noble *Ihaggaren* Tuareg. Permanent settlements of Ahaggar are apparently never mentioned in the writings of Medieval Arab authors. We know that Ahaggar was visited by Ibn Batutah. He does not mention any settlements in this country, of which and its inhabitants "there is little good to say" (Ibn Batutah IV, p. 446).

A.4. *Subterranean or semi-subterranean dwellings.*

Subterranean or semi-subterranean dwellings seem to be unknown in Ayr and also in the regions inhabited by most other Southern Tuareg though found among sedentary people along the Niger Bend (cf. Hefel 1946, p. 190 ff.). They are known also in Ahaggar where they are used exclusively by black-skinned agriculturists who claim that this type of dwelling named *eddamus* was introduced into Ahaggar with the *Kel Ĝanet*. This agrees with the fact that these dwellings are particularly common in the region of Taṛhawhawt where many of the *Kel Ĝanet* live. However, subterranean dwellings nowadays are also used by certain other sedentary agriculturists of Ahaggar. The dwellings are not very deep, and frequently they are only semi-subterranean, the upper part then consisting of walls built of rectangular pieces of sundried mud or of stones kept together by mud. The subterranean or semi-subterranean dwelling normally has a rectangular site, and is not very spacious. Introduced by the *Kel Ĝanet*, this type of dwelling is comparatively recent in Ahaggar. I have not seen subterranean

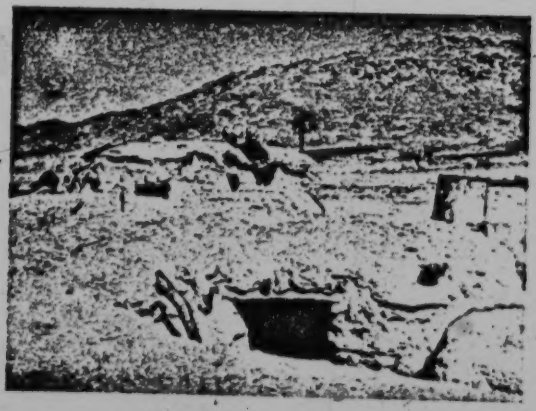

Fig. 248. Semi-subterranean house with two rooms (*eddamus*). Ahaggar, I-n-gawen.

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*342 A Tuareg hut of this type from the *Kel Terurit* (*Isekkemaren*) belonged to the chief of that tribe. It lay not far from Ft. Polignac (Élézi) and I lived in it for several days. It was constructed as follows:—

A heavy central forked post with a diameter of about 0.15 m at its thick end was buried solidly in the ground. Nine smaller forked sticks about 1.50 m high and with a diameter of about 0.07–0.08 m were fixed in the ground in a circle around the central post with a distance of 1.50–2.00 m between each. Nine laths with a diameter of about 0.07–0.08 m rested in the prongs of the nine forked sticks and were united in the large prong of the high central post. Sticks of the same diameter were placed horizontally over the prongs of the nine vertical sticks surrounding the central post. The nine laths formed the basis of the conical roof construction, and smaller boughs were laid over them to support the thick layer of *tulhult* grass covering the roof. The wall was also covered with large bunches of *tulhult* grass which were supported by small boughs put in the ground and leaning against the vertical forked sticks and their horizontal laths. This grass or hay covering the wall was kept to the wooden construction by means of a long rope made of goat's hair running round the hut. Cords of the same material and also pieces of bast were used to tie the various elements together. The hut had two entrances about 1.50 m wide and 1.00 m high. These were placed opposite each other (N-S) to permit a current of air to circulate through the hut. Other huts seen among the Tuareg of Tasilé-n-Ajjer were very similar to that described, but most of them were smaller and had a less elevated central post. Some of the huts did not have an entirely round ground-plan and were not easily distinguishable from the square straw-hut mentioned above. However, there was no doubt that most huts used among the pastoral Tuareg of Tasilé-n-Ajjer were round or cylindrical in form and had a conical roof. Most Tuareg of this area live in round straw-huts nowadays, and I saw this type even among true noble Tuareg of the *Uraren* tribe. The huts are used mainly in the hot summer season when pastoralists camp around wells and water-holes, while most people in winter use skin-tents. The huts are built by the women and they are not transported if the camp moves to another place as building material is easily found. Moreover, it seems as if many pastoralists during the hot season always return to the same place at a definite well or waterhole. Duveyrier states that in such fixed camps ("campements

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Fig. 252. A small cylindrical *ékebar* hut covered with *tulhult* grass (*Aristida pungens*). Tasilé-n-Ajjer.

[text continues on p. 338]

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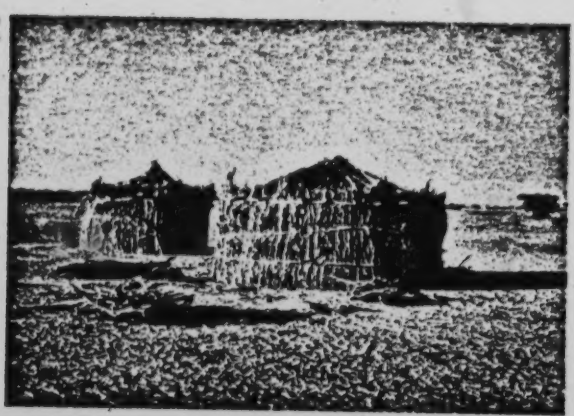

Fig. 254. Cylindrical huts with conical roofs. The Fezzan area. Photograph by Dr. Erik Smidt, Copenhagen.

*342 Duveyrier states that in such fixed camps ("campements
54 de station") the noble Tuareg of Tasilé-n-Ajjer live in tents, while the vassals use straw-huts (Duveyrier
[34] 1864, p. 403). The Tuareg of Tasilé-n-Ajjer agreed that this was so in the past, but nowadays noble Tuareg and vassals alike prefer the straw-hut in summer because the leather tent is extremely hot at that season. Barth also states that many vassal Tuareg of the *Kel Ajjer* do not live in leather tents like the noble Tuareg, but in round, conical huts akin to those of Central Africa, and he says that many Tuareg of the *Ajjer* group have an intermediate position between sedentary and nomadic people (Barth 1857–58, I, p. 257). Everything seems to indicate that the straw-huts (*ikebran*) used among the Tuareg of Tasilé-n-Ajjer form the traditional dwelling of most vassal Tuareg, and it seems as if the round and conical *ékeber* type is of more ancient date with them than the square or rectangular type A.5.b.

*342 Cylindrical huts with a conical roof are used by the Tuareg who live in the Fezzan area, and they are also here somewhat mixed with the square or rectangular straw hut. This is stated by Despois who describes these dwellings in some detail (Despois 1946, p. 83 f.). A round hut with conical roof similar to the hut mentioned above from the Tuareg of Tasilé-n-Ajjer, but having 16 forked sticks around the central post instead of 9, is described in detail by Scarin from the Tuareg of the Ghadames region ([illegible]in 1934, I, p. 112 f., Fig. 90–94 & phot. 42).

In Ahaggar cylindrical huts or houses with conical roofs are less common than in Tasilé-n-Ajjer. I have seen very few of them, and they seem to be of different origins as follows:—

[22] Huts akin to the round *ékeber* type described above from Tasilé-n-Ajjer were seen in the *Amenukal*'s camp close to the village of Abalessa, and the same type occurred at Silet where it was used by Tuareg pastoralists of the tribes *Iklan-en-tawsit*, *Ikechchemaden*, and *Dag Rali* during their stay at Silet to harvest dates. These latter huts were made from very thick poles of palm trunk and their construction was identical to that described from Tasilé-n-Ajjer above (cf. Fig. 253 a-b). The palm trunk poles were

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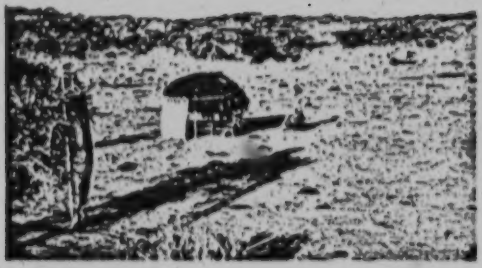

Fig. 270. An arched barrel-vaulted tent covered with a sheet of skin. In the background two arched mat tents. In the foreground to the left two cotton bows. Ayr, the *Kel Tédalé* tribe.

*342 true structure, and structurally there is a great diversity of tent types. It seems as if these tent structures can be divided into a few main groups which I shall describe in detail.

B.2.a. *Skin tents of arch construction.*

Tents which have one or more arches, generally placed at right angles to the longitudinal direction are widely found in Tuareg country. They are in fact more common than appears from the literature which has been so far published on Tuareg culture. The wide distribution of this particular structure in skin tents is interesting, the more so as it is related to the structure of mat tents. There are the following types of arch structures:—

B.2.a.1. This tent was seen in a camp of the *Kel Tédalé* Tuareg [illegible] north-western Ayr. It is known that skin tents are found among them (cf. Joubert 1939, p. 252 f.), but they have never been described. The Ayr Tuareg say that in the past many Tuareg of the *Kel Tédalé* lived in skin tents which, however, are less common among them nowadays. This agrees with my own experience. I have visited several *Kel Tédalé* camps, but I have only seen the skin tent here mentioned. This was found in a camp of three tents, the two others being ordinary mat tents. The skin tent I saw in this camp was also of the normal structure used for mat tents in Ayr, though shorter. The lower part was partly covered, not by a mat plaited from dum palm leaves, but by an *afezu* mat.

[114] [361]

[221]

B.2.a.2. Under this heading I describe two identical tents seen in a camp of *Ireǧenaten* Tuareg who belong to the Ahaggar federation but have their traditional grazing grounds west of the Ayr Massif in the Tamesna Plains. The camp was actually situated in the region between Tegidda-n-tésemt and I-n-abanṭerit, where perennial vegetation is extremely scarce and mainly comprises scattered *tamat* acacias (*Acacia flava*). The camp visited had eight skin tents among which were the two of arch construction as follows:—

[361] [137]

[824]

Both tents were very small, and their wooden structure was made of boughs of the *tamat* acacia (*Acacia flava*). In the middle of the tent and at right angles to its longitudinal direction there was an

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arch about 1.50 m high. It consisted of two boughs fixed in the ground and lashed together at their tops; this was termed *afeẓu* (pl. *iteẓan*). At both sides of this arch there was a horizontal cross-bar known as *areẓaraẓa* (pl. *ireẓeraẓaten*) which rested upon two forked sticks (*tégettewt*, pl. *tigettewin*). The arch and the two pairs of horizontal cross-bars were parallel to one another, connected by means of two semi-arches termed *ilellewan* (sing. *alellewa*) each of them made from two slender rods attached to each other over the arch. These semi-arches were fastened to the middle arch and to the outer edges of the two cross-bars by means of cords. Around this structure, which supported the sheet, there was a number of wooden poles or posts some of which were higher than the tent. These poles and posts were used for the attachment of the sheet, which, however, during my visit rested over the structure without any attachment. A narrow mat of the ordinary *afezu*-type belonged to this tent (Fig. 271).

Tents structurally akin to the B.2.a.2. type but without semi-arches in the longitudinal direction of the dwelling are found south and north of the Tamesna region:—

B.2.a.3. This tent was seen in a camp inhabited by blacksmiths of the *Kel Dennek* country around Tawa. They had temporarily settled not far from Agadez to work among pastoral *Kel Ayr*. The camp comprised only three tents which were very small – about 4.00 × 2.00 m with a height of about 1.20 m. The tents were structurally identical and had sheets sewn together from many small pieces of skin resting upon the following structure:— A central arch at right angles to the longitudinal direction. It was called *teḳḳeḳḳewat* (pl. *teḳḳeḳḳewatin*) like the central arch of the ordinary mat tent among the Ayr Tuareg. At both sides of this arch and parallel to it there was a somewhat lower horizontal cross-bar resting upon two forked sticks (*tigettewin*, sing. *tégettewt*). The sheet rested upon this structure and was fastened to a few upright poles fixed in the ground around it. There were three such sticks at the front and at the back, and one at each of the narrow ends. A mat about one metre high belonged to the tent; this mat was not a normal *afezu* mat, but plaited – apparently of dum palm material (cf. Fig. 272). A wooden bed (*téḍabut*) was placed in the middle of the tent, occupying most of its ground area.

Fig. 271. Skin tent of the B.2.a.2. type. Ahaggar Tuareg of Tamesna, the *Iraḍesanen* tribe.

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*342 B.2.a.6. The tent has one arch made of tamarix root, and this arch is placed parallel to the longitudinal direction at the back of the tent. A horizontal cross-bar (*aregaraga*) rests with one end upon the top of the arch, while its other end is supported by a vertical forked pole at the front of the tent. At both sides of this cross-bar there is a cross-bar (*aregaraga*) resting upon two forked sticks (*tiget-tewin*). This type is excellently depicted by Lhote (cf. Lhote 1947a, photos 24–26 p. 49 & 64; 1955, Fig. 23 p. 256).

B.2.a.7. The tent is identical with B.2.a.6 with the exception that there are two central horizontal cross-bars resting upon the top of the hind arch and upon two upright forked poles placed very close to each other in the front.

[381] B.2.a.8. This is a tent described and depicted by Barth from a Tuareg camp south of the Niger between the Hombori Mountains and the city of Bambara:— The sheet is suspended over three pairs of sticks of which the middle pair is much higher than the outer pairs. The middle pair of sticks is not of the same type in all tents, for the two high sticks in some tents are bent against each other and kept together by means of a very short piece of wood ("Querholz"). Judging from Barth's illustration of this tent it would seem as if the two middle sticks, united by a small piece of wood at their bent tops, form a high central arch. The skin tent, which contains two beds made from date palm-fronds, is apparently a very large one. It is provided with a mat of the type generally used for skin tents (Barth 1857–58, IV, p. 345 f.).

We conclude this description of arched skin tents by saying that these dwellings seem to be found within most Tuareg groups. Such tents are not so common nowadays as they were earlier. This is true of Ahaggar, where most Tuareg had arched skin tents until quite recently. Thus several informants about 50 or 60 years old told me that in their childhood most Ahaggar Tuareg lived in skin tents of this type.

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Fig. 275. Skin tent of the B.2.b.1 type. In the foreground a bed (*ténébou*) resting upon four forked sticks. Ahaggar Tuareg of Tamesna, the *Irejenaten* tribe.

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B.2.b. *Skin tents with semi-arches over horizontal cross-bars* 342*

I have seen such tents among Ahaggar Tuareg of Tamesna, and it is from this area that I describe the following structure:—

B.2.b.1. Three tents of this type were seen in the *Iregenaten* camp which comprised eight tents south of *I-n-abanjerit*. One of the tents was very large with a sheet measuring about 7.00×7.00 m, while the two others were comparatively small. The two small tents had a maximum height of about 1.50 m, while the large tent was about 1.70 m high. Structurally the three tents were identical, as follows:— [341]

Three pairs of forked sticks with horizontal cross-bars were placed parallel to one another at right angles to the longitudinal direction. The middle pair of sticks was a good deal higher than the two outer pairs; the two central poles or sticks were called *igetten* (sing. *aget*) and the sticks of the two outer pairs *tigeffewin* (sing. *tegeffewt*). The three horizontal cross-bars were all known as *iregeragaten* (sing. *aregaraga*). The skeleton of these three cross-bars resting upon pairs of sticks had in addition two semi-arches known as *ilellewan* (sing. *alellewa*). Each of these semi-arches consisted of two slender rods, tied together at their thin ends resting upon the central cross-bars to which they were also fastened with cords, while the thick ends of the semi-arches were tied to the two outer cross-bars close to their edges. This structure, we see, is not very different from the B.2.a.2 type. The sole distinction between these two types is that the latter has a central arch instead of a central cross-bar resting upon upright poles. Actually, the types B.2.b.1 and B.2.a.2 were seen in the same camp and constituted five out of the total eight tents found in it. The wooden structure of the B.2.b.1. tents was also made from boughs of the *tamat* acacia (*Acacia flava*). The sheet was attached to a number of poles, both in the front and at the back, while the narrow ends were kept close to the grounds by means of short wooden pegs. The ordinary *afeẓu* mats belonged to all three tents (Fig. 275).

B.2.b.2. This is a very small tent depicted by Lhote from the *Iwillemmeden* Tuareg around Gao. [131] Its structure appears to be related to that just described (cf. Lhote 1947a, photo 79 p. 113).

B.2.b.3. This is a most interesting type of skin tent which is described by Lhote from the south-western Tuareg – the *Tengerregif* and the *Kel Inteser*. The type is illustrated by excellent photographs which clearly indicate the structure, namely:— There are two long semi-arches each of which is made from two curved sticks lashed together. The semi-arches are attached at their thick ends to two horizontal cross-bars, each of which rests upon a pair of forked sticks. The horizontal cross-bars are very short so that the distance between the two parallel semi-arches which follow the longitudinal direction of the structure is also very short. The semi-arches are further supported by two other short cross-bars each resting upon two sticks. These sticks with their cross-bars are not always erected in the same way. In summer, the sticks are upright, while in winter they are placed obliquely towards the inside. All poles and sticks which make up the structure are buried solidly in the ground, and this is also the case with the very large number of poles placed along the sides for fastening the sheet. According to Lhote, some of these poles are termed *igem* and *amousen* (*ammusen*), which words are also used in Ahaggar for certain poles. Though the structure is a very narrow one, these tents may nevertheless be very large as the sheet is fastened to many poles placed at some distance from the narrow structure [101] (Lhote 1947a, p. 100, 160 f., photographs nos. 85–93 p. 128–129).

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[281
284]

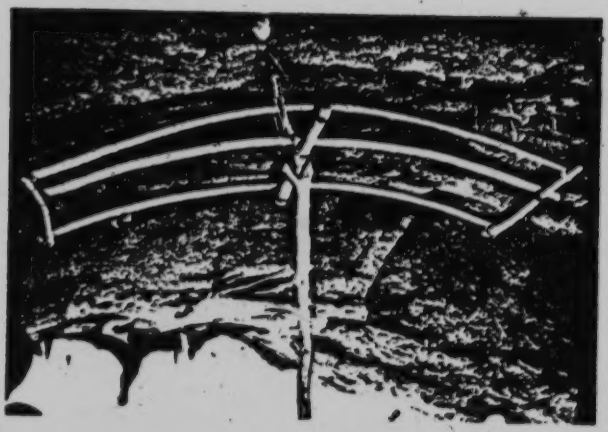

Fig. 283. Cross-bar (*tamankayt*) of the B.2.g.7 type. Ahaggar Tuareg of Tamesna, the *Ireǧenaten* tribe.

in case of very extreme heat in the summer make a kind of primitive T-shaped post from a simple bough of tamarisk, to the top of which they attach a short stick of the same material. They then wrap pieces of old cotton around the place of attachment in order that the post shall not gall the sheet. [114] But though I have lived among vassal Tuareg of Ahaggar over extremely long periods of the hot season I have seen such primitive T-shaped posts only once. As already stated T-shaped posts seem to be advantageous also during heavy showers of rain as the water quickly runs off the sheet. However, I have never seen vassal Tuareg use simple T-shaped posts in case of heavy rainfall, for they content themselves with holding a stick or pole against the sheet as long as rain falls. Primitive T-shaped posts like those just described from Ahaggar and consisting of a simple post at the top of which a short horizontal stick is attached, seem to be a mere imitation of the true T-shaped posts. However, there is another and very interesting type of T-shaped post, which I describe below under the two headings:—

● [361] B.2.g.7. This tent I saw in a camp of *Ireǧenaten* Tuareg not far from I-n-abanṭerit in the Tamesna Plains. The tent had two pairs of forked sticks (*tiǧeǰǰewin*) each pair carrying a horizontal cross-bar (*areǧaraǧa*). These forked sticks with their cross-bars were about 0.70 m high. While these sticks were buried in the ground there was between their two cross-bars a central forked post (*aǧet*) about 1.20 metres high. In its prong it carried a most unusual cross-bar called *tamankayt*. This consisted of a wooden frame 1.44 m long and 0.72 m broad made from three long sticks attached to three short ones the middle one of which was particularly heavy and rested in the prong of the central post (cf. Fig. 283). The short sticks were parallel to the two outer cross-bars and at right angles to the longitudinal direction. In other words, the length of this cross-bar frame followed the longitudinal direction of the tent, but in spite of this we can speak of a cross-bar placed at a right angle to the longitudinal direction, as one of the short sticks of the frame rests upon the central post. The frame-like cross-bar was not fastened to the outer cross-bars with cords, and the central post was not buried in the ground.